PUBLIC NOTICE

Arconic Tennessee LLC. has applied to the Tennessee Department of Environment and Conservation, Division of Air Pollution Control for renewal of their major source (Title V) operating permit subject to the provisions of Tennessee Air Pollution Control Regulations 1200-03-09-.02(11) (Title V Regulations). A major source operating permit is required by both the Federal Clean Air Act and Tennessee's air pollution control regulations. However, it should be noted that this facility has a current major source operating permit.

The applicant is **Arconic Tennessee LLC.** with a site address of 300 North Hall Road, Alcoa, TN. They have applied for renewal of their existing major source (Title V) operating permit for their South Ingot South Remediation operation.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. In this case, EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. The status regarding EPA's 45-day review of these permits and the deadline for submitting a citizen's petition can be found at the following website address:

https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits"

Copies of the application materials and draft permits are available for public inspection during normal business hours at the following locations:

Knoxville Environmental Field Office 3711 Middlebrook Pike Knoxville, TN 37921 Tennessee Department of Environment and Conservation Division of Air Pollution Control William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15th Floor Nashville, TN 37243

Electronic copies of the draft permits are available by accessing the TDEC internet site located at:

and

 $\underline{https://www.tn.gov/environment/ppo-public-participation/ppo-public-$

Questions concerning the source(s) may be addressed to S. Deloach at (615) 532-0608 or by e-mail at Shandia.Deloach@tn.gov.

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be received no later than 4:30 PM on **April 4, 2022.** To assure that written comments are received and addressed in a timely manner, written comments must be submitted using one of the following methods:

- 1. **Mail, private carrier, or hand delivery:** Address written comments to Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15th Floor, Nashville, Tennessee 37243.
- 2. **E-mail**: Submit electronic comments to air.pollution.control@tn.gov.

A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 22nd Floor, Nashville, TN 37243, 1-(866)-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

STATE OF TENNESSEE AIR POLLUTION CONTROL BOARD DEPARTMENT OF ENVIRONMENT AND CONSERVATION NASHVILLE, TENNESSEE 37243



OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (TAPCR). The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued:		Permit Number:
Date Expires:		578688
Issued To:		Installation Address:
Arconic Tennessee LLC		300 North Hall Road
		Alcoa, Tennessee
Installation Description:	South Ingot South Remediation	1
21: South Ingot Casting No. 1	57: South Ingot Casting No. 3	72: Skim Cooling and Storage
Facility ID: 05-0008		
Renewal Application Due Date:		Primary SIC: 33
Between ****** and ******		
Information Relied Upon: Renewal Application dated Novemb Letter dated March 1, 2021	er 25, 2020	
(continued on the next page)		

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

TECHNICAL SECRETARY

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SECTION D

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ATTACHMENT 4	Operation, Maintenance and Monitoring (OM&M) Plan
ATTACHMENT 5	Title V Fee Selection Form

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

A1. <u>Definitions.</u> Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

A2. <u>Compliance requirement.</u> All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

A3. Need to halt or reduce activity. The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

A4. The permit. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

A5. Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

A6. Submittal of requested information. The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested

proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

A7. Severability clause. The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

- (a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.
- (b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.
- (c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.
- (d) Where more than one allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.
 - 1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.
 - **2.** A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.
 - 3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM_{10} shall not be placed in either the regulated HAP category or miscellaneous HAP category.
 - **4.** Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM₁₀, sulfur dioxide (SO₂), volatile organic compounds (VOC), nitrogen oxides (NO_x), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.
 - 5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).
 - Major sources that wish to pay annual emission fees for PM10 on an allowable emission basis may do so if they have a specific PM10 allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM10 emission basis, it may do so if the PM10 actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM10 emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM10 emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM10 emissions.

TAPCR 1200-03-26-.02 and 1200-03-09-.02(11)(e)1(vii)

A9. Permit revision not required. A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

- **A10.** <u>Inspection and entry.</u> Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:
 - (a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
 - **(b)** Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
 - (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- **(b)** Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - **3.** The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - **4.** The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) If the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
 - 1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
 - 2. Additional requirements become applicable to an affected source under the acid rain program.
 - 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - **4.** The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.
- (c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.
- (d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:
 - 1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.
 - **2.** EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
 - **3.** If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
 - **4.** If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted

pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR. 1200-03-09-.02(11)(f)6 and 7.

- **A14. Permit transference.** An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:
 - (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
 - **(b)** written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

- **A15.** Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.
- A16. Construction permit required. Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(a) or subparagraph TAPCR 1200-03-02-.01(1)(c), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

- **A17.** <u>Notification of changes.</u> The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.
 - (a) change in air pollution control equipment
 - (b) change in stack height or diameter
 - (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. Schedule of compliance. The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Title VI.

- (a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - **1.** Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.

- Equipment used during the maintenance, service, repair, or disposal of appliances must comply 2. with the standards for recycling and recovery equipment pursuant to Section 82.158.
- Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
- If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program(SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.
- A20. Sources which are subject to the provisions of Section 112(r) of the federal Clean Air Act or 112 (r). any federal regulations promulgated thereunder, shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. The annual certification is due in the office of the Technical Secretary no later than January 31 of each year. Said certification will be for the preceding calendar year.

TAPCR 1200-03-32-.03(3)



SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

- **B1.** Recordkeeping. Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.
 - (a) Where applicable, records of required monitoring information include the following:
 - 1. The date, place as defined in the permit, and time of sampling or measurements;
 - **2.** The date(s) analyses were performed;
 - 3. The company or entity that performed the analysis;
 - **4.** The analytical techniques or methods used;
 - 5. The results of such analyses; and
 - **6.** The operating conditions as existing at the time of sampling or measurement.
 - (b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

Retention of monitoring data. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

Reporting. Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B4. <u>Certification.</u> Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

- **B5.** Annual compliance certification. The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):
 - (a) The identification of each term or condition of the permit that is the basis of the certification;

- (b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether <u>compliance during the period was continuous or intermittent</u>. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.
- * "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

 ** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

The Tennessee Department of	and	Air Enforcement Branch
Environment and Conservation		US EPA Region IV
Environmental Field Office specified	61 Forsyth Street, SW	
in Section E of this permit		Atlanta, Georgia 30303

TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

- **B7.** Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
 - (a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - 1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.
 - 2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that

adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

- **3.** During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
- 4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- **(b)** In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

- (a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.
- (b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.
- (c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than

twenty-four hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

- 1. Stack or emission point involved
- 2. Time malfunction, startup, or shutdown began and/or when first noticed
- **3.** Type of malfunction and/or reason for shutdown
- **4.** Time startup or shutdown was complete or time the air contaminant source returned to normal operation
- **5.** The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

B9. Malfunctions, startups and shutdowns - reasonable measures required. The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These

measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

B10. Reserved.

- **Report required upon the issuance of a notice of violation for excess emissions.** The permittee must submit within twenty days after receipt of the notice of violation, the data required below. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty day time period. The minimum data requirements are:
 - (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
 - (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions:
 - (c) The time and duration of the emissions;
 - (d) The nature and cause of such emissions;
 - (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
 - (f) The steps taken to limit the excess emissions during the occurrence reported, and
 - (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

- **C1.** Operational flexibility changes. The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
 - (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
 - **(b)** The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
 - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
 - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
 - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
 - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
 - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

C2. Section 502(b)(10) changes.

- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
- (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - **3.** a declaration and quantification of any change in emissions:
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. <u>a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.</u>
- (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

C3. Administrative amendment.

- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.
- (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this

condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.

(c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

C4. Minor permit modifications.

- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).
- **(b)** The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
- (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
- (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

- (a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).
- **(b)** Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

- (a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.
- (b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).
- (c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

D1. <u>Visible emissions.</u> With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty percent for an aggregate of more than five minutes in any one hour or more than twenty minutes in any twenty-four hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty percent (6-minute average) except for one six minute period per one hour of not more than forty percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

D2. General provisions and applicability for non-process gaseous emissions. Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- **D3.** Non-process emission standards. The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.
- **D4.** General provisions and applicability for process gaseous emissions. Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- **D5.** Particulate emissions from process emission sources. The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.
- **D6.** Sulfur dioxide emission standards. The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

D7. Fugitive Dust.

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking

reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

- 1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
- **2.** Application of asphalt, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;
- **3.** Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
- (b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five minutes per hour or twenty minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

D8. Open burning. The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of TAPCR 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

- **D10.** Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.
- **D11.** Emission Standards for Hazardous Air Pollutants. When applicable, the permittee shall comply with the TAPCR 0400-30-38 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-38

D12. Standards of Performance for New Stationary Sources. When applicable, the permittee shall comply with the TAPCR 0400-30-39 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-39

D13. Gasoline Dispensing Facilities. When applicable, the permittee shall comply with the TAPCR 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14. Internal Combustion Engines.

- (a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-38-.01.
- (b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.01.

(c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.02.

TAPCR 0400-30-38 and 39



SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

05-0008 South Ingot South Remediation	Facility Description:	South Ingot: South Ingot operations include three distinct emission units. Casting pit No. 1 includes three holding furnaces numbered 5, 6, and 7, and degassing units. Casting pit No. 3 includes two melting furnaces numbered 9 and 11, two holding furnaces numbered 10 and 12, and degassing units. Skim cooling and storage is also included.
Kemediation		South Remediation: Insignificant activities only

Conditions E1 through E3-8 apply to all sources in Section E of this permit unless otherwise noted.

E1. Fee payment

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 05-0008 SOUTH INGOT

		01111110011100	2102 00 0000 20 0 111 11 10 0 1	
	ALLOWABLE	ACTUAL		
	EMISSIONS	EMISSIONS		
REGULATED POLLUTANTS	(tons per AAP)	(tons per	COMMENTS	
		AAP)		
PARTICULATE MATTER (PM)	100.51	AEAR	Fee emissions include PM10	
PM_{10}		AEAR	Fee emissions included above	
SO_2	26.54	AEAR		
VOC	N/A	AEAR		
NO_X	196.84	AEAR		
CATEGORY OF MISCELLANEO	US HAZARDOUS	S AIR POLLUT	ANTS (HAPs WITHOUT A STANDARD)*	
VOC FAMILY GROUP	N/A	N/A		
NON-VOC GASEOUS GROUP		N/A		
Chlorines	79.27			
Fluorines	5.6			
PM FAMILY GROUP	N/A	N/A		
CATEGORY OF SPECIFIC	CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAPs WITH A STANDARD)**			
VOC FAMILY GROUP	N/A	AEAR	NESHAP (40 CFR Part 63 Subpart RRR).	
			Fee emissions are included in VOC above.	
NON-VOC GASEOUS GROUP	95.05	AEAR	NESHAP (40 CFR Part 63 Subpart RRR).	
			Hydrogen Chloride emissions. Fee	
			emissions are not included above.	
PM FAMILY GROUP	N/A	N/A		
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***				
EACH NSPS POLLUTANT	N/A	N/A		
NOT LISTED ABOVE				

NOTES

AAP The Annual Accounting Period (AAP) is a 12 consecutive month period that either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b)

begins January 1st and ends December 31st of the same year when paying on a calendar year basis. The Annual Accounting Period at the time of permit renewal issuance began January 1, 2022 and ends December 30, 2022. The next Annual Accounting Period begins January 1, 2023 and ends December 31, 2023 unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions. Changes in fee bases must be made using the Title V Fee Selection form, form number APC 36 (CN-1583), included as an attachment to this permit and available on the Division of Air Pollution Control's website.

- **AEAR** If the permittee is paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **A**ctual Emissions **A**nalysis is **R**equired to determine the actual emissions of:
 - (1) **each regulated pollutant** (Particulate matter, SO_2 , VOC, NO_X and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
 - (2) each pollutant group (VOC Family, Non-VOC Gaseous, and Particulate Family),
 - (3) the Miscellaneous HAP Category,
 - (4) the **Specific HAP Category**, and
 - (5) the NSPS Category

under consideration during the Annual Accounting Period.

- * Category Of Miscellaneous HAP (HAP Without A Standard): This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the VOC Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation, the Miscellaneous HAP Category is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.
- ** Category Of Specific HAP (HAP With A Standard): This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the VOC Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation, each individual hazardous air pollutant of the Specific HAP Category is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.
- *** Category Of NSPS Pollutants Not Listed Above: This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the PM, SO₂, VOC or NO_X emissions from each source in this permit. For fee computation, each NSPS pollutant not listed above is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

END NOTES

The permittee shall:

(1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in

TAPCR 1200-03-26-.02(9)(g). Fees may be paid on an **actual**, **allowable**, or **mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).

- (2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d).
- (3) Sources paying annual emissions fees on an actual emissions basis: prepare an actual emissions analysis for each AAP and pay actual based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d). The actual emissions analysis shall include:
 - (a) the completed Fee Emissions Summary Table,
 - (b) each actual emissions analysis required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the actual emissions analyses required by the above Fee Emissions Summary Table.
- (4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
 - (a) the completed Fee Emissions Summary Table,
 - (b) each actual emissions analysis required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions** analysis.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).

(5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

The annual emission fee due dates are specified in TAPCR 1200-03-26-.02(9)(g) and are dependent on the Responsible Official's choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-

26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:

Payment of Fee to:

The Tennessee Department of Environment and

and Conservation

Division of Fiscal Services Consolidated Fee Section – APC

William R. Snodgrass Tennessee Tower

312 Rosa L. Parks Avenue, 10th Floor

Nashville, Tennessee 37243

Actual Emissions Analyses to: The Tennessee Department of Environment and Conservation Division of Air Pollution Control

Emission Inventory Program

William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15th Floor

Nashville, Tennessee 37243

or

An electronic copy (PDF) of actual emissions analysis can also be submitted to: apc.inventory@tn.gov

E2. Reporting requirements.

(a) <u>Semiannual reports.</u> Semiannual reports shall cover the six-month periods from January 1 to June 30 and July 1 to December 31 and shall be submitted within 60 days after the end of each six-month period. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
570521	January 1, 2022	day before new permit issuance (with year)
578688	Issuance Date of new permit (with year)	end of SAR period (with year)

These semiannual reports shall include:

- (1) Any monitoring and recordkeeping required by **Conditions E5-1, E6-1, E6-2, and E7-1** of this permit. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The visible emission evaluation readings from Condition E3-1 of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (3) Identification of all instances of deviations from ALL PERMIT REQUIREMENTS.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

- (b) Annual compliance certification. The permittee shall submit annually compliance certifications with each term or condition contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):
 - (1) The identification of each term or condition of the permit that is the basis of the certification;

- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.
- * "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.
 - ** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month period from <u>July 1</u> to <u>June 30</u> and shall be submitted within 60 days after the end of each 12-month period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
570521	July 1, 2021	day before new permit issuance (with year)
578688	Issuance Date of new permit (with year)	end of ACC period (with year)

and

These certifications shall be submitted to: TN APCD and EPA

Division of Air Pollution Control Knoxville Environmental Field Office Tennessee Division of Air Pollution Control 3711 Middlebrook Pike Knoxville, TN 37921 or APC.KnoxEFO@tn.gov Air Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303

 $40\ CFR\ Part\ 70.6(c)(5)(iii)$ as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

TAPCR 1200-03-09-.02(11)(e)3.(v)

Retention of Records All records required by any condition in Section E of this permit must be (c) retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

E3. General requirements applicable to permitted facility.

E3-1. Visible emissions from all stacks at south ingot shall not exhibit greater than 20% opacity, except for one sixminute period in any one hour period and for no more than four six-minute periods in any twenty-four hour period. Visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: Compliance with this opacity limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, amended September 11, 2013, using EPA Method 9 that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring.

E3-2. Routine maintenance, as required to maintain specified emission limits in this permit, shall be performed on the air pollution control device(s). Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. These records must be retained for a period of not less than five years.

TAPCR 1200-03-09

E3-3. Logs and records specified in this permit shall be made available upon request by the Technical Secretary or a Division representative and shall be retained for a period of not less than five years unless otherwise noted. The logs contained in this permit are based on a recommended format. Any logs that have an alternative format may be utilized provided they contain the same information that is required.

TAPCR 1200-03-10-.02(2)(a)

- Upon the malfunction/failure of any emission control device(s) serving this source, the operation of the E3-4. process(es) served by the device(s) shall be regulated by Chapter 1200-03-20 of the Tennessee Air Pollution Control Regulations.
- E3-5. Record keeping requirements for this facility, including all data and calculations, must be updated and maintained based on the following schedule:

Record Keeping Type	<u>Update Requirement</u>
Monthly Log	Recorded within 30 days after the end of the month
Weekly Log	Recorded within 7 days after the end of the week
Daily Log	Recorded within 7 days after the end of the day

TAPCR 1200-03-10-.02(2)(a)

The permittee listed various insignificant and exempt activities in their Title V Applications per Rule 1200-03-E3-6. 09-.04(5). Additional insignificant activities may be added and operated at any time with the provision that a written notification shall be submitted to the Technical Secretary including an updated APC V.2 application form along with a truth, accuracy, and completeness statement signed by a responsible official.

TAPCR 1200-03-09

E3-7. Due allowance for failure to monitor shall be made during any period of monitoring system malfunction, provided that the source owner or operator shows, to the satisfaction of the Technical Secretary, that the malfunction was unavoidable and is being repaired as expeditiously as practicable and that a log of all such malfunctions is being kept by the permittee, including time malfunction began, when it was detected, what was wrong, what was done to correct the malfunction, and when the malfunction was corrected.

TAPCR 1200-03-10-.02(1)(e)

- E3-8. Identification of Responsible Official, Technical Contact, and Billing Contact
 - a) The application that was utilized in the preparation of this permit is dated November 25, 2020 and signed by Responsible Official Jeffery Weida, Location Manager of the permitted facility. If this person terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.
 - b) The application that was utilized in the preparation of this permit is dated November 25, 2020 and identifies Caitlin Newman, Environmental Engineer as the Principal Technical Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.
 - c) The application that was utilized in the preparation of this permit is dated November 25, 2020 and identifies Caitlin Newman, Environmental Engineer as the Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.
- E4. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum
 Production Plant (40 CFR Part 63 Subpart RRR) Requirements for Casting Pits No. 1 and No. 3 which
 Include Group 1 Furnaces and In-line Fluxers

Emission Units Subject to Subpart RRR

Emission Units Subject To:

Holding Furnaces No. 5, 6, 7, 10 and 12 Group 1 Furnace, Reactive Flux Addition, No

Controls

Melting Furnaces No. 9 and 11 Group 1 Furnace, Reactive Flux Addition, No

Controls

Inline Degassers Pit 1 North & South, Pit 3 North &

South

In-line Fluxer, Reactive Flux Addition, No Controls

Emission Standards Group 1 Furnaces

E4-1. Particulate matter emissions from group 1 furnaces shall not exceed 0.40 pounds of particulate matter (PM) per ton of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(i)(1)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test will assure continuous compliance. The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) ¹	Test Date	PM Results (lb/hr)	PM Emission Factor (lb/ton)		
Melting Furnace #11 (Includes: #9)	October 2020	2.636	0.16		
Holding Furnace #12 (Includes: #5, #6, #7, & #10)	October 2020	1.178	0.086		
1 – Representative emission units were tested pursuant to 40 CFR §63.1511(f)					

E4-2. Dioxins and furans (D/F) emissions from group 1 furnaces shall not exceed 15 μg of D/F TEQ (The international method of expressing toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposure to Mixtures of Chlorinated Dibenzo-p-Dioxins and –Dibenzofurans (CDDs and CDFs) and 1989 Update)" per mega grams of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(i)(3)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test will assure continuous compliance. The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) 1	Test Date	Results (µg of D/F TEQ /hr)	Emission Factor (µg of D/F TEQ/Mg)
Melting Furnace #11 (Includes: #9)	October 2020	NA	0.06
Holding Furnace #12 (Includes: #5, #6, #7, & #10)	Not Required ²	NA	NA

^{1 –} Representative emission units were tested pursuant to 40 CFR §63.1511(f)

^{2 –} Holding furnaces process only clean charge, 40 CFR §63.1512(e)(2)

E4-3. Hydrogen chloride (HCl) emissions from group 1 furnaces shall not exceed 0.40 pounds of HCl per ton of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(i)(4)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test will assure continuous compliance. The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) ¹	Test Date	HCl Results (lb/hr)	HCl Emission Factor (lb/ton)	
Melting Furnace #11 (Includes: #9)	October 2020	1.109	0.067	
Holding Furnace #12 (Includes: #5, #6, #7, & #10)	October 2020	0.732	0.042	
1 – Representative emission units were tested pursuant to 40 CFR §63.1511(f)				

E4-4. Hydrogen fluoride (HF) emissions from group 1 furnaces shall not exceed 0.40 pounds of HF per ton of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(i)(4)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test assure continuous compliance.

The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) 1	Test Date	HF Results (lb/hr)	HF Emission Factor (lb/ton)		
Melting Furnace #11 (Includes: #9)	October 2020	0.0185	0.0011		
Holding Furnace #12 (Includes: #5, #6, #7, & #10)	October 2020	0.00688	0.0004		
1 – Representative emission units were tested pursuant to 40 CFR §63.1511(f)					

Emission Standards Inline Fluxers (Degassing Units)

E4-5. Hydrogen chloride (HCl) emissions from inline fluxers shall not exceed 0.04 pounds of HCl per ton of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3). 40 CFR §63.1505(j)(1)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test will assure continuous compliance. The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) ¹	Test Date	HCl Results (lb/hr)	HCl Emission Factor (lb/ton)	
Inline Degasser Pit 3 North	October 2020	0.00028	0.0000053	
Includes: Inline Degassers Pit 1 North &South, Pit 3 South				
1 – Representative emission units were tested pursuant to 40 CFR §63.1511(f)				

E4-6. Particulate matter (PM) emissions from inline fluxers shall not exceed 0.01 pounds of particulate matter per ton of aluminum produced. Arconic is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(j)(2)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test will assure continuous compliance. The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Unit(s) 1	Test Date	PM Results (lb/hr)	PM Emission Factor (lb/ton)		
Inline Degasser Pit 3 North Includes: Inline Degassers Pit 1 North &South, Pit 3 South	October 2020	0.0212	0.0004		
1 – Representative emission units were tested pursuant to 40 CFR §63.1511(f)					

Operating Requirements

E4-7. The owner or operator must provide and maintain easily visible labels posted at each group 1 furnace and inline fluxer that identifies the applicable emission limits and means of compliance. The labels shall include the type of affected source or emission unit and the applicable operational standards and work practices. This includes, but is not limited to, the type of charge to be used for a furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M (operation, maintenance, and monitoring) plan.

40 CFR §63.1506(b)

Compliance Method: Maintain labels as required.

E4-8. The owner or operator shall install and operate a device that measures and records or otherwise determines the weight of throughput for each operating cycle or time period used in the performance test and operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.

40 CFR §63.1506(d)

Compliance Method: Install and operate a device as required.

E4-9. The owner or operator of a group 1 furnace without an add-on air pollution control device must maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

In addition, the owner or operator must operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.

The current OM&M plan (Attachment 4) identifies the total reactive injection rate for all group 1 furnaces.

40 CFR §63.1506(n)

Compliance Method: Compliance for the total reactive flux injection rate shall be assured by maintaining records of flux addition and aluminum produced that shows compliance with the rate established during the performance test and documented in the current OM&M plan.

Compliance with the work practice/pollution prevention measures shall be assured by following the OM&M plan.

E4-10. When a process parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices or minimizing emissions. Corrective actions taken must include following up actions necessary to return the process parameter levels to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation.

40 CFR §63.1506(p)

Compliance Method: Compliance shall be assured by following the current OM&M plan.

Monitoring Requirements

E4-11. The owner or operator must prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator of any new affected source must submit the OM&M plan to the Technical Secretary within 90 days after a successful initial performance test. The plan must be accompanied by a written certification by the owner or operator that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b). The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the Technical Secretary, unless and until the plan is revised in accordance with the following procedures. If the Technical Secretary determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 40 CFR §63.1510(b), the owner or operator must promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Technical Secretary. Each plan must contain the information in 40 CFR §63.1510(b)(1) through 9.

40 CFR §63.1510(b)

Compliance Method: Compliance shall be assured by developing and maintaining an OM&M plan. The current OM&M plan is included in Attachment 4.

E4-12. The owner or operator must inspect the labels for each group 1 furnace and inline fluxer at least once per calendar month to confirm that posted labels are intact and legible.

40 CFR §63.1510(c)

Compliance Method: Compliance with this requirement shall be assured by performing and recording the inspections at least once per month.

E4-13. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the permitting authority for major sources, or the Administrator for area sources to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.

The owner or operator must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the affected source or emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis.

The accuracy of the weight measurement device or procedure must be $\pm 1\%$ of the weight being measured.

The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

40 CFR §63.1510(e)

Compliance Method: Compliance shall be assured by installing and maintaining the measuring device as noted and by maintaining documentation from the manufacturer confirming the accuracy of the measuring device.

E4-14. The owner or operator must install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit (inline degassers Pit #1 and #3).

The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.

The accuracy of the weight measurement device or procedure must be $\pm 1\%$ of the weight of the reactive component of flux being measured.

The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

The owner or operator must calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the performance test using the procedures in 40 CFR §63.1512(o).

The owner or operator must record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of gaseous or liquid reactive flux other than chlorine and solid reactive flux (for group 1 furnaces).

The owner or operator must calculate and record the total reactive flux injection rate (lb/ton) for each operating cycle or time period used in the performance test using the procedures in 40 CFR §63.1512(o).

For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the performance test using the procedures in 40 CFR §631512(o).

40 CFR §63.1510(j)

Compliance Method: Compliance shall be assured by installing and maintaining the measuring device as noted and by maintaining documentation from the manufacturer confirming the accuracy of the measuring device.

E4-15. The owner or operator must develop, in consultation with the Technical Secretary, a written site-specific monitoring plan. Specific requirements for the site-specific monitoring plan are detailed in 40 CFR §63.1510(o),

The current site-specific monitoring plan is included in the current OM&M plan located in Attachment 4.

40 CFR §63.1510(o)

Compliance Method: Compliance shall be assured by developing and maintaining a site-specific monitoring plan.

E4-16. The owner or operator must develop a scrap inspection program as identified in 40 CFR §63.1510(p). The scrap inspection program must include the monitoring requirements of 40 CFR §63.1510(q).

The current scrap inspection program is included in the current OM&M plan located in Attachment 4.

40 CFR §63.1510(p) and §631510(q)

Compliance Method: Compliance shall be assured by developing and maintaining a scrap inspection program.

Other NESHAP Requirements

E4-17. The owner or operator must conduct performance tests as needed by following the requirements in 40 CFR §63.1511and §63.1512.

40 CFR §63.1511 and §63.1512

Compliance Method: Compliance with this requirement shall be assured by conducting the performance tests as required.

E4-18. The owner or operator must maintain records and submit reports in accordance with 40 CFR §63.1515, §63.1516 and §63.1517.

40 CFR §63.1515, §63.1516 and §63.1517

Compliance Method: Compliance with this requirement shall be assured by maintaining the required records and by submitted semiannual reports and periodic reports as required.

E4-19. The owner or operator must, in addition to the NESHAP requirements that are noted in this permit, following all relevant requirements in 40 CFR part 63 subpart RRR and subpart A, as noted in appendix A of subpart RRR.

40 CFR part 63 subpart RRR

Compliance Method: Compliance shall be assured by following all relevant requirement in 40 CFR part 63 subpart A.

E5. Emission Source

05-0008-21	Source Identification: Stacks:	Casting Pit No. 1 No. 5 Holding Furnace with Degassing Unit No. 6 Holding Furnace with Degassing Unit No. 7 Holding Furnace with Degassing Unit No. 5 Degassing Unit No. 6 Degassing Unit TNHFRN0103_EP TNHFRN0104_EP
		TNHFRN0101_EP
	Control Equipment:	None
	Heat Input	120 million Btu per hour

Conditions E5-1 through E5-7 apply to source 05-0008-21.

E5-1. Emissions from this source shall not exceed the rates in the following table:

Pollutant	Emission Rate (daily average)	Regulatory Basis
Particulate Matter (TSP)	0.02 grains per dry standard cubic foot (14.1 lbs/hr), and 28.8 tons per all intervals of 12 consecutive months	TAPCR 1200-03-0704(1) TAPCR 1200-03-0701(5), agreement letter dated March 22, 2000, to avoid PSD review
Sulfur Dioxide	3.0 lbs/hr	TAPCR 1200-03-1403(5)
Carbon Monoxide	10.08 lbs/hr	TAPCR 1200-03-0707(2)
Volatile Organic Compounds	NA	TAPCR 1200-03-0901(5)(b)10.
Nitrogen Oxides	10.0 lbs/hr	TAPCR 1200-03-0707(2)
Chlorine (Cl ₂)	3.3 lbs/hr	TAPCR 1200-03-0707(2)
Hydrogen Chloride (HCl)	10.3 lbs/hr	TAPCR 1200-03-0707(2)
Total Fluorides	0.40 lbs/ton	40 CFR §63.1505(i)(4)

Compliance Method: Compliance with the emission rates of particulate matter, hydrogen chloride, and chlorine shall be assured through daily recordkeeping of aluminum produced, salt usage and chlorine usage and the following emission factors. The average hourly emission rates (daily average) shall be determined and recorded for each day of operation. These records shall be maintained on-site for a period of not less than 5 years and made available to the Technical Secretary or a Division representative upon request.

Compliance rate of total fluorides shall be demonstrated by a performance test. The results from the performance test and operation of the units within the operating parameters established during the performance test assure continuous compliance.

Note: The limit for Volatile organic compound (VOC) emissions from this source has been removed. Arconic has an active PAL (plant wide applicability limitation) for VOCs of 1,715.92 tons during all intervals of 12 consecutive months, permit 967460, which was effective December 1, 2013.

Unit(s) ¹ Casting Pit #1	Pollutant	Emission Factor	Reference
Holding Furnace #5	Particulate Matter	0.086 lb / ton of Al	October 2020 Performance Test

Particulate Matter	0.086 lb / ton of Al	October 2020 Performance Test
Particulate Matter	0.086 lb / ton of Al	October 2020 Performance Test
Particulate Matter	0.0004 lb / ton of Al	October 2020 Performance Test
Particulate Matter	0.0004 lb / ton of Al	October 2020 Performance Test
Hydrogen Chloride	0.042 lb / ton of Al	October 2020 Performance Test
Hydrogen Chloride	0.042 lb / ton of Al	October 2020 Performance Test
Hydrogen Chloride	0.042 lb / ton of Al	October 2020 Performance Test
Hydrogen Chloride	0.0000053 lb / ton of Al	October 2020 Performance Test
Hydrogen Chloride	0.0000053 lb / ton of Al	October 2020 Performance Test
Total Fluorides	0.0004 lb/ ton of Al	October 2020 Performance Test
Total Fluorides	0.0004 lb/ ton of Al	October 2020 Performance Test
Total Fluorides	0.0004 lb/ ton of Al	October 2020 Performance Test
Chlorine	0.0001 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
Chlorine	0.0001 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
Chlorine	0.0001 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
Chlorine	0.0001 lb / lb of Cl ₂ (gas)	August 2001 Performance Test
	Particulate Matter Particulate Matter Particulate Matter Hydrogen Chloride Hydrogen Chloride Hydrogen Chloride Hydrogen Chloride Hydrogen Chloride Total Fluorides Total Fluorides Chlorine Chlorine	Particulate Matter Particulate Matter 0.0004 lb / ton of Al Particulate Matter 0.0004 lb / ton of Al Particulate Matter 0.0004 lb / ton of Al Hydrogen Chloride 0.042 lb / ton of Al Hydrogen Chloride 0.042 lb / ton of Al Hydrogen Chloride 0.042 lb / ton of Al Hydrogen Chloride 0.0000053 lb / ton of Al Hydrogen Chloride 0.000053 lb / ton of Al Total Fluorides 0.0004 lb/ ton of Al Total Fluorides 0.0004 lb/ ton of Al Chlorine 0.0001 lb / lb of Cl ₂ (salt) Chlorine 0.0001 lb / lb of Cl ₂ (salt) Chlorine 0.0001 lb / lb of Cl ₂ (salt) Chlorine 0.0001 lb / lb of Cl ₂ (salt) Chlorine 0.0001 lb / lb of Cl ₂ (salt)

¹⁻A representative emission unit (Holding Furnace #12 & Pit #3 North Degasser) was tested pursuant to 40 CFR 63.1511(f)

Compliance Method: Compliance with the emission rates of volatile organic compounds, nitrogen oxides, sulfur dioxide and carbon monoxide shall be assured through daily recordkeeping of natural gas usage and the following emission factors. The average hourly emission rates (daily average) shall be determined and recorded for each day of operation. These records shall be maintained on-site for a period of not less than 5 years and made available to the Technical Secretary or a Division representative upon request.

Unit(s) Casting Pit #1	Pollutant	Emission Factor	Reference
Holding Furnace #5 #6, & #7 and North & South Inline Degassers	Volatile Organic Compounds	5.5 lb / million cubic feet of natural gas	AP-42, Attachment 2
Holding Furnace #5 #6, & #7 and North & South Inline Degassers	Nitrogen Oxides	55 lb / million cubic feet of natural gas	September 2001 Performance Test
Holding Furnace #5 #6, & #7 and North & South Inline Degassers	Sulfur Dioxide	0.6 lb / million cubic feet of natural gas	AP-42, Attachment 2
Holding Furnace #5 #6, & #7 and North & South Inline Degassers	Carbon Monoxide	84 lb / million cubic feet of natural gas	AP-42, Attachment 3

E5-2. Chlorine (Cl₂) used for filter box fluxing shall not exceed 40 standard cubic feet per hour not to exceed 468 standard cubic feet per day.

TAPCR 1200-03-07-.07(2)

Compliance Method: A daily record shall be kept recording the chlorine usage for this source. This record shall be maintained at the source location and kept for inspection by the Technical Secretary or a Division representative for a period of not less than five years.

E5-3. A daily record of the amount of bulk salt fluxes used along with the composition shall be maintained at the source location.

TAPCR 1200-03-09, Permit 952604P

Compliance Method: A daily record shall be kept recording the usage for bulk salt flux at this source. Bulk salt fluxes records included the flux composition shall be maintained at the source location and kept for inspection by the Technical Secretary or a Division representative for a period of not less than five years.

E5-4. The exhaust gas from Holding Furnace No. 5 shall be discharged unobstructed, vertically upwards to the ambient air from a stack with an inside stack exit measurement of 42 inches by 75.96 inches, within a measurement accuracy of \pm 10%, not less than 71 feet above ground level.

TAPCR 1200-03-09, Permit 952604P

Compliance Method: The Technical Secretary may require the permittee to prove compliance with the stack dimensions.

E5-5. The exhaust gas from Holding Furnaces No. 6 and 7 shall be discharged unobstructed, vertically upwards to the ambient air from a stack with an inside stack exit measurement of 45 inches by 72 inches, within a measurement accuracy of \pm 10%, not less than 91 feet above ground level.

TAPCR 1200-03-09, Permit 952604P

Compliance Method: The Technical Secretary may require the permittee to prove compliance with the stack dimensions.

E5-6. The maximum heat input for this source shall not exceed 120 million British Thermal Units (Btu) per hour and only natural gas or propane shall be used as fuel.

TAPCR 1200-03-09, Permit 952604P

Compliance Method: 120 million Btu per hour is the design capacity of these furnaces. Compliance with this condition shall be verified by records of burner design capacity. Records that readily assure compliance with this condition shall be maintained at the source location and kept available for inspection by the Technical Secretary or a Division representative. This record shall be retained for a period of not less than five years.

E5-7. For fee purposes, the permittee shall calculate the actual emissions of particulate matter, sulfur dioxide, volatile organic compounds (VOC), nitrogen oxides, chlorine and hydrogen chloride for the current annual accounting period. Actual emissions of the noted compounds shall be calculated based on the emission factors as noted in **Condition E5-1**.

The calculated emissions and supporting documentation shall be submitted as required by ${\bf Condition}~{\bf E1}.$

TAPCR 1200-03-26-.02(9)

E6 Emission Source

05-0008-57	Source	Casting Pit No. 3
	Identification:	No. 9 Melting Furnace
		No. 10 Holding Furnace with Degassing Unit
		No. 11 Melting Furnace
		No. 12 Holding Furnace with Degassing Unit
	Stacks:	TMNFRN0108_EP
		TMNFRN0105_EP
		TMNFRN0107_EP
		TMNFRN0106_EP
	Control Equipment:	None
	Heat Input:	No. 9 Melting Furnace, 120 million Btu per hour
		No. 10 Holding Furnace with Degassing Unit, 33.30 million Btu per hour
		No. 11 Melting Furnace, 120 million Btu per hour
		No. 12 Holding Furnace with Degassing Unit, 33.30 million Btu per hour

Conditions E6-1 through E6-3 apply to source 05-0008-57.

E6-1. Emissions from this source shall not exceed the rates in the following table:

Pollutant	Emission Rate (daily average)	Regulatory Basis
Particulate Matter (TSP)	8.6 lbs/hr and 36.67 tons per all intervals of 12 consecutive months	TAPCR 1200-03-0701(5) TAPCR 1200-03-0901(4), agreement letter dated January 4, 1999, to avoid PSD review
Chlorine (Cl ₂)	14.8 lbs/hr	TAPCR 1200-03-0707(2)
Hydrogen Chloride (HCl)	11.4 lbs/hr	TAPCR 1200-03-0707(2)

Dioxins/furans (D/F)	0.012 lb/hr	See condition E4-2 for compliance with D/F emissions
Total Fluorides	0.40 lbs/ton	40 CFR §63.1505(i)(4)

Compliance Method: Compliance with the emission rates of particulate matter, hydrogen chloride, and chlorine shall be assured through daily recordkeeping of aluminum produced, salt usage and chlorine usage and the following emission factors. The average hourly emission rates (daily average) and 12 consecutive month totals shall be determined and recorded for each day or month of operation. These records shall be maintained on-site for a period of not less than 5 years and made available to the Technical Secretary or a Division representative upon request.

Compliance rate of total fluorides shall be demonstrated by a performance test. The results from the performance test and operation of the units within the operating parameters established during the performance test assure continuous compliance.

Unit(s) ¹ Casting Pit #3	Pollutant	Emission Factor	Reference
Melting Furnace #9	Particulate Matter	0.16 lb / ton of Al	October 2020 Performance Test
Melting Furnace #11	Particulate Matter	0.16 lb / ton of Al	October 2020 Performance Test
Holding Furnace #10 with Degassing Unit	Particulate Matter ²	0.086 lb / ton of Al	October 2020 Performance Test
Holding Furnace #12 with Degassing Unit	Particulate Matter ²	0.086 lb / ton of Al	October 2020 Performance Test
Melting Furnace #9	Hydrogen Chloride	0.067 lb / ton of Al	October 2020 Performance Test
Melting Furnace #11	Hydrogen Chloride	0.067 lb / ton of Al	October 2020 Performance Test
Holding Furnace #10 with Degassing Unit	Hydrogen Chloride ²	0.042 lb / ton of Al	October 2020 Performance Test
Holding Furnace #12 with Degassing Unit	Hydrogen Chloride ²	0.042 lb / ton of Al	October 2020 Performance Test
Melting Furnace #9	Total Fluorides	0.0011 lb / ton of Al	October 2020 Performance Test
Melting Furnace #11	Total Fluorides	0.0011 lb/ ton of Al	October 2020 Performance Test
Holding Furnace #10 with Degassing Unit	Total Fluorides	0.0004 lb/ ton of Al	October 2020 Performance Test
Holding Furnace #12 with Degassing Unit	Total Fluorides	0.0004 lb/ ton of Al	October 2020 Performance Test
Melting Furnace #9	Chlorine	0.011 lb / lb of Cl ₂ (salt)	August 2001 Performance Test

Melting Furnace #11	Chlorine	0.011 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
Holding Furnace #10	Chlorine	0.0001 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
Holding Furnace #12	Chlorine	0.0001 lb / lb of Cl ₂ (salt)	August 2001 Performance Test
#10 Degasser	Chlorine	0.0001 lb / lb of Cl ₂ (gas)	August 2001 Performance Test
#12 Degasser	Chlorine	0.0001 lb / lb of Cl ₂ (gas)	August 2001 Performance Test

^{1 –} A representative emission unit (Holding Furnace #12, Pit #3 North Degasser, and Melting Furnace #11) was tested pursuant to 40 CFR §63.1511(f)

E6-2. Emissions from this source shall not exceed the rates in the following table:

Pollutant	Emission Rate	Regulatory Basis
Sulfur Dioxide	3.0 lbs/hr and 13.4 tons per all intervals of 12 consecutive months	TAPCR 1200-03-1403(5)
Carbon Monoxide	11.2 lbs/hr and 49.06 tons per all intervals of 12 consecutive months	TAPCR 1200-03-0707(2) and TAPCR 1200-03-0705(1) TAPCR 1200-03-0901(4), agreement letter dated January 4, 1999, to avoid PSD review
Volatile Organic Compounds	NA	TAPCR 1200-03-0901(5)(b)10.
Nitrogen Oxides	34.94 lbs/hr and 153.04 tons per all intervals of 12-consecutive months	TAPCR 1200-03-0707(2) and TAPCR 1200-03-0705(1) TAPCR 1200-03-0901(4), agreement letter dated January 4, 1999, to avoid PSD review

Compliance Method: Compliance with the emission rates of volatile organic compounds, nitrogen oxides, sulfur dioxide and carbon monoxide shall be assured through daily recordkeeping of natural gas usage and aluminum production and the following emission factors. The average hourly emission rates (daily average) and 12 consecutive month totals shall be determined and recorded for each day or month of operation. These records shall be maintained on-site for a period of not less than 5 years and made available to the Technical Secretary or a Division representative upon request.

Note: The limit for Volatile organic compound (VOC) emissions from this source has been removed. Arconic has an active PAL (plant wide applicability limitation) for VOCs of 1,715.92 tons during all intervals of 12 consecutive months, permit 967460, which was effective December 1, 2013.

^{2 –} Emissions were combined from individual performance tests for the degasser and the holding furnace.

Unit(s) ¹ Casting Pit #3	Pollutant	Emission Factor	Reference
Melting Furnace #9 & #11	Volatile Organic Compounds	0.032 lb / ton of Al	August 1994 Performance Test
Holding Furnace #10 & #12	Volatile Organic Compounds	0.04 lb / ton of Al	August 1994 Performance Test
Holding Furnace #10 & #12	Nitrogen Oxides	55 lb / million cubic feet of natural gas	August 2001 Performance Test
Melting Furnace #9 & #11	Nitrogen Oxides	100 lb / million cubic feet of natural gas	AP-42, Attachment 3
Holding Furnace #10 & #12 and Melting Furnace #9 & #11	Sulfur Dioxide	0.6 lb / million cubic feet of natural gas	AP-42, Attachment 2
Holding Furnace #10 & #12 and Melting Furnace #9 & #11	Carbon Monoxide	84 lb / million cubic feet of natural gas	AP-42, Attachment 3

^{1 –} A representative emission unit (Holding Furnace #12, Pit #3 North Degasser, and Melting Furnace #11) was tested pursuant to 40 CFR §63.1511(f)

E6-3. For fee purposes, the permittee shall calculate the actual emissions of particulate matter, sulfur dioxide, volatile organic compounds, nitrogen oxides, chlorine, hydrogen chloride and total fluorides for the current annual accounting period. Actual emissions of the noted compounds shall be calculated based on the emission factors as noted in **Conditions E6-1 and E6-2**.

The calculated emissions and supporting documentation shall be submitted as required by **Condition E1**.

TAPCR 1200-03-26-.02(9)

E7 Emission Source

05-0008-72	Source Identification:	Skim Cooling and Storage Building 81B
	Stacks:	Not applicable
	Control Equipment:	None

Conditions E7-1 through E7-3 apply to source 05-0008-72.

E7-1. Particulate matter (TSP) emitted from this source shall not exceed 8.0 lb/hr based on a daily average.

TAPCR 1200-3-7-.01(5), Letter of Agreement dated May 24, 1996

Compliance Method: A daily record shall be kept for this source recording tons of aluminum processed per day through Pit #1 and Pit #3, and the number of operating hours per day. As determined from month end accounting reports, monthly net loss percentages and daily production rate for Pit #1 and Pit #3 shall be used to determine daily net melt loss. Compliance with the pounds per hour particulate matter emission limitation is assured by utilizing the daily melt loss and the 5.54 pounds of particulate matter emissions per ton of melt loss

emission factor developed for this source from stack testing. The daily emissions of particulate matter will be averaged over the daily operating hours to show compliance with the pound per hour limitation.

Particulate matter emission rate (lb/hr) = [(W Melt Loss) x (PRSkimEF) / OH]

Where:

W Melt Loss = Calculated daily net melt loss of aluminum casting operations at Pit #1 and Pit #3 using monthly net melt loss percentages and daily production rate for Pit #1 and Pit #3 (tons per day)

PRSkimEF = Process rate particulate matter emission factor developed from stack test data conducted in April 1995 (lb/ton of calculated daily net melt loss) [5.54 pounds of particulate matter emitted per ton of net melt loss]

OH = daily operating hours

E7-2. The minimum flow rate of exhaust/ventilation system serving this source shall not be less than 1,000 dry standard cubic feet per minute (dscfm)

TAPCR 1200-03-09, Permit 744463P

Compliance Method: The Technical Secretary may require the permittee to prove compliance with this requirement.

E7-3. For fee purposes, the permittee shall calculate the actual emissions of particulate matter for the current annual accounting period. Actual emissions of the noted compounds shall be calculated based on the emission factor as noted in **Condition E7-1**.

The calculated emissions and supporting documentation shall be submitted as required by Condition E1.

TAPCR 1200-03-26-.02(9)

END OF PERMIT 578688 CONDITIONS

$\frac{OPACITY\ MATRIX\ DECISION\ TREE\ for\ VISIBLE\ EMISSION\ EVALUATION}{METHOD\ 9}$



Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64)

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

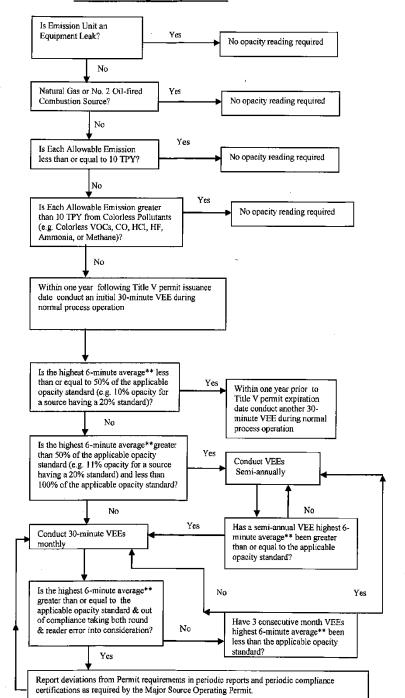
Reader Error EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards: The TAPCD guidance is to declares noncompliance when the highest six-minute

compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards: EPA guidance is to allow only engineering round. No allowance for reader error is given.

- *Not applicable to Asbestos manufacturing subject to 40 CFR 61.142
- **Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996 Amended September 11, 2013



Section 1.4 of AP-42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources

NATURAL GAS COMBUSTION

Table 1.4-2



TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION^a

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	A
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	E
N ₂ O (Controlled-low-NO _X burner)	0.64	E
PM (Total) ^c	7.6	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	В
$\mathrm{SO}_2{}^\mathrm{d}$	0.6	A
TOC	11	В
Methane	2.3	В
VOC	5.5	С

- a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.
- b Based on approximately 100% conversion of fuel carbon to CO₂. CO₂[lb/10⁶ scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.
- ^c All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.
- d Based on 100% conversion of fuel sulfur to SO₂.

 Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

Section 1.4 of AP-42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources

NATURAL GAS COMBUSTION

Table 1.4-1



Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION^a

	N	NO_x^b		СО	
Combustor Type (MMBtu/hr Heat Input) [SCC]	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]					
Uncontrolled (Pre-NSPS) ^c	280	A	84	В	
Uncontrolled (Post-NSPS) ^c	190	A	84	В	
Controlled - Low NO _x burners	140	A	84	В	
Controlled - Flue gas recirculation	100	D	84	В	
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]					
Uncontrolled	100	В	84	В	
Controlled - Low NO _x burners	50	D	84	В	
Controlled - Low NO _x burners/Flue gas recirculation	32	С	84	В	
Tangential-Fired Boilers (All Sizes) [1-01-006-04]	V				
Uncontrolled	170	A	24	C	
Controlled - Flue gas recirculation	76	D	98	D	
Residential Furnaces (<0.3) [No SCC]					
Uncontrolled	94	В	40	В	

Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from lb/10 6 scf to kg/106 m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from 1b/10 6 scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

b Expressed as NO₂. For large and small wall fired boilers with SNCR control, apply a 24% reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13% reduction to the appropriate NO_X emission factor.

NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984

Operation, Maintenance and Monitoring (OM&M) Plan

December 14, 2020



National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production Plants



South Ingot Facility Operation, Maintenance and Monitoring Plan

ENV-205

Document Manager: C. Newman

Prepared By:

Arconic Tennessee LLC 2300 North Wright Rd. Alcoa, Tennessee 37701

December 14, 2020

Note: This is considered an uncontrolled document unless it is being viewed on-line from the Tennessee Operations Environmental Homepage.

Area: South Ingot

Original Issue Date: 3/24/03 Revision Date: 12/14/20 Controlled Document

OM&M Plan Revision History

Plan Description	Prepared By	Date	Approved By	Date
Original Plan	Wes Capps	3/24/03	John Kincaid	3/24/03
Revision 1	Chris Moore	8/28/06	John Kincaid	8/28/06
Revision 2	Chris Moore	4/02/07	John Kincaid	4/02/07
Revision 3	Chris Moore	9/30/09	John Kincaid	9/30/09
Revision 4	Chris Moore	12/16/10	John Kincaid	12/16/10
Revision 5	Chris Moore	3/7/12	John Kincaid	3/7/12
Revision 6	Chris Moore	9/24/12	John Kincaid	9/24/12
Revision 7	Alisa Hatmaker	11/24/15	Ken A. McMillen	11/24/15
Revision 8	Alisa Hatmaker	5/13/16	Ken A. McMillen	5/13/16
Revision 9	Alisa Hatmaker	11/16/16	Jeffrey C. Weida	11/16/16
Revision 10	Alisa Hatmaker	3/20/17	Jeffrey C. Weida	3/2017
Revision 11	Alisa Hatmaker	10/30/17	Jeffrey C. Weida	10/30/17
Revision 12	Alisa Hatmaker	12/5/17	Jeffrey C. Weida	12/5/17
Revision 13	Caitlin Newman	8/26/20	Jeffrey C. Weida	8/26/20
Revision 14	Caitlin Newman	12/14/20	Jeffrey C. Weida	12/14/20

Note that the Secondary Aluminum NESHAP requires revised plans to be submitted to and approved by the Administrator prior to implementing at the facility. Any OM&M revisions must be noted and summarized in the Semi-Annual Secondary Aluminum NESHAP Excess Emissions/Summary Report.

OMM Plan Certification

The OM&M plan satisfies all requirements of 40 CFR 63 Subpart RRR as applicable to the facility. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Signature of Responsible Official:	Lefty C. Weide
Name of Responsible Official:	Jeffrey C. Weida
Title of Responsible Official:	Location Manager
Date:	December 14, 2020

Area: South Ingot

Original Issue Date: 3/24/03 Revision Date: 12/14/20 Controlled Document

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1.0 INTRODUCTION

On March 23, 2000, the United States Environmental Protection Agency promulgated National Emissions Standards For Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Plants under 40 CFR Part 63, Subpart RRR. These regulations, which are applicable to secondary aluminum operations, establish regulations on the emissions of organic hazardous air pollutants (HAPs), inorganic gaseous HAPs (hydrogen chloride, hydrogen fluoride, and chlorine), and particulate HAP metals. Arconic Tennessee Operations is a major source of HAPs and is required to comply with the MACT standards promulgated on March 23, 2000.

40 CFR 63.1510 requires each affected facility to prepare and submit an Operation, Maintenance and Monitoring (OM&M) Plan to the regulatory agency for each affected facility. As outlined in 40 CFR 63.1510 (b), the OM&M Plan should address the following elements:

- Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- 2. A monitoring schedule for each affected source and emission unit.
- Procedures for the proper operation and maintenance of each process unit and addon control device used to meet the applicable emission limits or standards in § 63.1505.
- Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (i) Calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions or at least once every 6 months; and (ii) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
 - (i) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

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- Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in paragraph (o) of this section for each group 1 furnace not equipped with an add-on air pollution control device.
- Procedures to be followed when changing furnace classification under the provisions of 63.1514. The following sections of this OM&M Plan address each of the above elements.

1.1 Plant Description and Operation

The South Ingot facility consists of two casting pits for casting of aluminum ingots.

- Casting Pit No. 1
 - o Holding Furnaces 5, 6, and 7
 - North and South Inline Degassers
- Casting Pit No. 3
 - Melting Furnaces 9 and 11
 - Holding Furnaces 10 and 12
 - North and South Inline Degassers

Casting Pit No. 1 includes three holding furnaces and two inline degassers. Molten metal from the adjacent secondary aluminum production operation is input into these holding furnaces where alloying and salt fluxing occurs. The molten metal is then transferred to molds that form aluminum ingots via an inline degasser and filter. The inline degasser is used for final purification of the metal through the addition of chlorine gas flux via rotors in the degasser. Skimming of the furnace occurs prior to tapping of the furnace. The furnace is tapped as production schedule dictates. The holding furnaces operate in a batch mode. No pollution control equipment is utilized for Casting Pit No. 1.

Casting Pit No. 3 includes two melting furnaces, two holding furnaces and two inline degassers. Scrap metal from on-site fabrication operations and from off-site locations is charged into the melting furnaces in addition to a salt flux. The molten metal is then tapped to the adjacent holding furnaces where alloying and salt fluxing occurs. Molten metal from the adjacent secondary aluminum production operation is input into these holding furnaces as well. The molten metal is then transferred to molds that form aluminum ingots via an inline degasser and filter. The inline degasser is used for final purification of the metal through the addition of chlorine gas flux via rotors in the degasser. Skimming of the furnace occurs prior to tapping of the furnace. The furnace is tapped as production schedule dictates. The holding furnaces operate in a batch mode. No pollution control equipment is utilized for Casting Pit No. 3.

Affected emission units covered by this OM&M plan are summarized below:

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Emission Unit	Description	Classification
Melting Furnace No.	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Melting Furnace No. 11	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 10	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 12	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 5	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 6	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 7	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Pit 1 North Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 1 South Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 3 North Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 3 South Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable

2.0 OM&M PLAN ELEMENTS

2.1 Process and Control Device Parameters (63.1510(b)(1))

Process and control device parameters must be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device. The following process parameters are to be monitored:

Parameter	Emission Unit	Monitoring Range 1,2
Production	Holding Furnace No. 5	360,000 pounds/charge
Rate	Holding Furnace No. 6	360,000 pounds/charge
	Holding Furnace No. 7	360,000 pounds/charge
	Melting Furnace No. 9	280,000 pounds/charge
	Melting Furnace No. 11	280,000 pounds/charge
	Holding Furnace No. 10	360,000 pounds/charge
	Holding Furnace No. 12	360,000 pounds/charge
Reactive Flux	Pit No. 3 Melting Furnaces 9&11;	0-0.9 pounds of chlorine/ ton of charge (maximum of 1.6 pounds of salt per ton of metal)

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Parameter	Emission Unit	Monitoring Range 1,2
Injection Rate – Salts	Pit No. 1 Holding Furnaces 5, 6, & 7; Pit No. 3 Holding Furnaces 10&12	0-0.6 pounds of chlorine/ton of charge (maximum of 1.1 pounds of salt per ton of metal)
Reactive Flux	Pit No. 1 Inline Degassers (1 North and 3 South)	0.045 pounds chlorine per ton of metal processed
Injection Rate - Chlorine	Pit No. 3 Inline Degassers (3 North and 3 South)	0.045 pounds of chlorine per ton of metal processed
Purchased Scrap	Melting Furnace No. 9	Limited to 90,000 pounds of oily purchased scrap per charge
- 19 - 19- 19- 19- 19- 19- 19- 19- 19- 19- 19-	Melting Furnace No. 11	Limited to 90,000 pounds of oily purchased scrap per charge
Purchased Scrap – Automotive	Melting Furnace No. 9 & 11	Each melting furnace charge may include up to 100% purchased automotive scrap

¹ Furnace production weight range is based on the design capacity of each furnace.

2.1.1 Site-Specific Monitoring Plan (63.1510(o))

A site-specific monitoring plan (SSMP) is required by 63.1510(o) for each uncontrolled Group 1 furnace. Elements of the SSMP applicable to Arconic Tennessee Operations include:

- Documentation of work practice, equipment/design practice, pollution prevention practice, or other measure to meet the applicable emission standards;
- · Provisions for unit labeling, feed/charge weighing, and flux weighing; and,
- · Scrap inspection program.

Affected emission units covered by the SSMP are summarized below:

Emission Unit	Description	Classification
Melting Furnace No. 9	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Melting Furnace No. 11	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 10	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 12	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 5	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace

² Chlorine in salt factor is equivalent to 0.54.

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Holding Furnace No. 6	Batch holding furnace with reactive flux Group 1 Furnace addition (salt)
Holding Furnace No. 7	Batch holding furnace with reactive flux Group 1 Furnace addition (salt)

The South Ingot Site-Specific Monitoring Plan (SSMP) is included in Appendix A.

2.2 Parameter Monitoring Schedule (63.1510(b)(2) and (5))
The monitoring schedule for each affected source and emission unit will be as follows:

Emission Unit	Parameter	Monitoring Requirement	Frequency
Uncontrolled Group 1 Furnaces	Production Weight	Must install, calibrate, operate, and maintain a device to measure and record the aluminum production from the unit (measurement accuracy must meet +/- 1 percent). The procedure to utilize production weight for aluminum production on a unit basis is included in Appendix B.	Normal operating cycle
	Total Reactive Flux Injection Rate – Salt (Chlorine)	Record the number of pre-weighed salt flux bags added to furnace and calculate flux injection rate (lb/ton) and compare to operating range.	Normal operating cycle
	Purchased Scrap Charged	Purchased scrap is staged for each melting furnace charge. No more than 90,000 pounds of oily purchased scrap is charged if not automotive scrap.	Monthly inspection of staging practice
		Each melting furnace charge may include up to 100% purchased automotive scrap.	Normal operating cycle
	Scrap Contamination Levels	Monitor purchased scrap through procurement process and scrap inspection program (Appendix A).	Each scrap shipment
	Labeling	The furnaces will require visible labels that identify the applicable emission limits and means of compliance including type of unit and applicable operational controls. An example label is included in Appendix C.	Monthly inspection of label

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Emission Unit	Parameter	Monitoring Requirement	Frequency
	Emission rates for PM, HCI, HF, and dioxin/furans (melting furnaces only)	Conduct performance testing to determine emissions and establish parametric limits. A summary of the performance test results is included in Appendix D.	Once every 5 years
Inline Degassers	Inline degasser aluminum throughput	Must install, calibrate, operate, and maintain a device to measure and record the aluminum production from the unit (measurement accuracy must meet +/- 1 percent).	Normal operating cycle
	Total Reactive Flux Injection Rate - Chlorine	Operate mass flow/data acquisition system to measure chlorine usage.	Record in 15- minute blocks; calculate total rate for operating cycle
		Calculate flux injection rate (lb/ton) and compare to operating range	Normal operating cycle
	Labeling	The inline degassers will require visible labels that identify the applicable emission limits and means of compliance including type of unit and applicable operational controls. An example label is included in Appendix C.	Monthly inspection of label
	Emission rates for PM and HCI	Conduct performance testing to determine emissions and establish parametric limits. A summary of the performance test results is included in Appendix D.	Once every 5 years

2.3 Proper Operating and Maintenance Procedures for Each Process Unit (63.1510(b)(3))

Procedures must be implemented for the proper operation and maintenance of each process unit used to meet the applicable emission limits or standards in 63.1505.

Process Unit	Operating or Maintenance Procedure
Uncontrolled Group 1 Furnaces	Operate within the purchased scrap and reactive flux limitations and the scrap inspection program established in section 2.1 and 2.2

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Process Unit	Operating or Maintenance Procedure		
Inline Degassers	Operate within the reactive flux limitations established in section 2.1 and 2.2		

2.4 Procedures for Proper Operation and Maintenance of Monitoring Devices or Systems (63.1510(b)(4))

The following monitoring systems are used to determine compliance of the monitoring devices including the procedures that will be initiated to assure proper operation and maintenance of these systems are as follows:

Monitoring System	Maintenance and Calibration Procedure
Weigh scales for production weight	On a semi-annual basis, routine maintenance will be performed on the scales as required, and calibrating the scales to <u>+</u> 1% accuracy.
Chlorine mass flow meters	On a semi-annual basis, routine maintenance will be performed on the mass flow meters as required and a confirmation determination of the meter performance to ± 1% accuracy will be completed using manufacturer procedures (Appendix E).

2.5 Procedures for Monitoring Process Parameters (63.1510(b)(5))

Procedures must be implemented for the proper operation and maintenance of each monitoring device used to meet the applicable emission limits or standards in 63.1505. Procedures for the proper operation and maintenance of monitoring devices or systems are summarized below.

Emission Unit	Parameter	Procedure or Device	Required Accuracy	Data Record
Uncontrolled Group 1 Furnaces	Production Weight	Hydraulic flow meter	± 1% of weight being measured	Computer data system
	Purchased Scrap	Manual staging procedure	Not applicable	Manual log sheet
	Reactive Flux Injection Rate – Salt (Chlorine)	Record number of bags of salt charged	± 1% of weight being measured	Computer data system
Inline Degassers	Reactive Flux Injection Rate - Chlorine	Mass flow meter	± 1% of weight being measured	Computer data system

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2.6 Corrective Actions (63.1510(b)(6))
Corrective actions to correct deviations from acceptable parameter ranges are summarized below:

Parameter	Corrective Action
Chlorine flow outside of the established operating parameter range – Inline Degasser	 The operator is to confirm the system status and the chlorine flow values received against the chlorine meter readouts. If chlorine flow outside the established ranges is confirmed, the operator is to: decrease the chlorine flow rate to get within the established operating parameter range, or turn off the chlorine flow to stop reactive fluxing Log the date and time that the parametric excursion began and ended Notify the shift supervisor. The shift supervisor is to review the system status, and if needed, notify maintenance personnel and initiate a work order for repairs/replacements If needed, any repairs or replacements are to be made in a safe, efficient and timely manner. The corrective action is to be logged in the startup, shutdown, and malfunction (SS&M) log, and specifically including the following required information: cause of the excursion action(s) taken to correct date and time corrective action(s) was initiated and completed steps to prevent reoccurrence of the excursion
Purchased Scrap Charge Limit Exceeded – Melting Furnace	 Log the date and time the parametric excursion began and ended Notify the shift supervisor. The shift supervisor will verify that the limit was exceeded. The corrective action is to be logged in the SS&M log, and specifically including the following required information: cause of the excursion action(s) taken to correct date and time corrective action(s) was initiated and completed steps to prevent reoccurrence of the excursion

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2.7 Process Maintenance Schedule (63.1510(b)(7))

A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. The following monitoring systems are used to determine compliance of the pollution control equipment including the procedures that will be initiated to assure proper operation and maintenance of these systems are as follows:

Monitoring Maintenance Schedule		
Weigh scales for production weight	On a semi-annual basis, routine maintenance will be performed on the scales as required, and calibrating the scales to <u>+</u> 1% accuracy.	
Chlorine Mass Flow Meters	On a semi-annual basis, routine maintenance will be performed on the mass flow meters as required and a confirmation determination of the meter performance to ± 1% accuracy will be completed using manufacturer procedures (Appendix E).	

2.8 Documentation of Work Practice and Pollution Prevention Measures (63.1510(b)(8) & (63.1510(o)(1))

The parametric monitoring required under the regulation (flux use, scrap inspection, etc.) and documented in this OM&M plan and as well as corrective actions taken for malfunctions constitute the work practices and pollution prevention measures for ensuring compliance. The documentation required under section 63.1517(b)(19)(i) for 63.1513(f)(1) is also maintained onsite to constitute the work practices and pollution prevention measures for ensuring compliance with emission standards during periods of start and shutdown.

Arconic does not and will not use reactive fluxes that contains fluorine as a component in its flux(es). Arconic will comply with the HF emission limit of 63.1505(i)(4) for uncontrolled group 1 furnaces through compliance demonstration performance testing and by maintaining copies of the relevant Safety Data Sheets on file.

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2.9 Process for Changing Furnace Classifications (63.1510)(b)(9) & (63.1514)

The Melting and Holding Furnaces are classified as Group 1 uncontrolled furnaces. Should Arconic elect to change any of these furnace operating modes, performance tests would need to be conducted to demonstrate compliance under both operating modes prior to making the change. Once testing is complete and operating parameters have been established, Arconic would then be limited a frequency of no more than four (4) times in any 6-month period to change the furnace operating modes unless approval from the Permitting agency is received as required in 63.1514(e) and 63.1514(e)(2).

2.10 Identification of Each Emission Unit

Each emission unit affected by the regulation is listed below:

Emission Unit	Description	Classification
Melting Furnace No. 9	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Melting Furnace No. 11	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 10	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 12	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 5	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 6	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 7	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Pit 1 North Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 1 South Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 3 North Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable
Pit 3 South Inline Degasser	Inline degasser with reactive flux addition (chlorine)	Not applicable

2.11 Specific Pollution Prevention Measures

All furnaces and inline degassers included in this OM&M plan utilize pollution prevention measures. The effective date of the aforementioned pollution prevention measures is March 24, 2003.

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2.12 Emission Limit Calculations and Performance Test Results

A summary of performance test data is included in Appendix D. Emission limits have been established according to the existing state air permits based on 24-hour averaging periods. 3-day, 24-hour SAPU averaging will not be implemented for emission units in this OM&M plan.

Arconic demonstrated compliance with section 63.1512(e)(4)(iii) during the most recent performance tests that were conducted after the final rule was published on September 18, 2015. Arconic assumed an 80-percent capture efficiency for the furnace exhaust. All sources demonstrated compliance with the 80-percent capture efficiency assumption. As stated in 63.1512(e)(4)(v), round top furnaces constructed before February 14, 2012, and reconstructed round top furnaces are exempt from the requirements listed in paragraphs 63.1512(e)(4)(i),(ii), and (iii). This applies to Melter Furnaces 9 & 11 at the South Ingot facility.

2.13 Information and Data Demonstrating Compliance for Each Emission UnitWork practice and pollution prevention measures utilized to determine compliance with the secondary MACT regulation are addressed in previous sections for those emission units covered by this OM&M plan.

2.14 Monitoring Requirements Applicable to Emission Units in a SAPUAs stated in section 2.11, no SAPU averaging will be performed for the emission units covered in this OM&M plan.

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Appendix A

Site-Specific Monitoring Plan for Uncontrolled Group 1 Furnaces

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A site-specific monitoring plan (SSMP) is required by 63.1510(o) for each uncontrolled Group 1 furnace. Elements of the SSMP applicable to Arconic Tennessee Operations include:

- Documentation of work practice, equipment/design practice, pollution prevention practice, or other measure to meet the applicable emission standards;
- · Provisions for unit labeling, feed/charge weighing, and flux weighing; and,
- Scrap inspection program.

Affected emission units covered by the SSMP are summarized below:

Emission Unit	Description	Classification
Melting Furnace No. 9	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Melting Furnace No. 11	Batch melting furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 10	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 12	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 5	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 6	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace
Holding Furnace No. 7	Batch holding furnace with reactive flux addition (salt)	Group 1 Furnace

Process Operating Parameters and Documentation of Work Practice and Pollution Prevention Measures (63.1510(o)(1) and (2))

Process parameters must be established to determine compliance, along with established operating levels or ranges, as applicable, for each process. These parameters were established during the initial performance testing conducted for the applicable emission units. As allowed by the existing TDAPC air permit and as established through the initial performance testing, the following process parameters are to be monitored for uncontrolled group 1 furnaces:

Parameter	Emission Unit	Monitoring Range	
Production	Holding Furnace No. 5	360,000 pounds/charge	
Rate	Holding Furnace No. 6	360,000 pounds/charge	
	Holding Furnace No. 7	360,000 pounds/charge	
	Melting Furnace No. 9	280,000 pounds/charge	
	Melting Furnace No. 11	280,000 pounds/charge	
	Holding Furnace No. 10	360,000 pounds/charge	

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Parameter	Emission Unit	charge (maximum of 1.6 pounds of salt per ton of metal) 0-0.6 pounds of chlorine/ton of	
	Holding Furnace No. 12		
Reactive Flux Injection	Pit No. 3 Melting Furnaces 9&11;		
Rate	Pit No. 1 Holding Furnaces 5, 6, & 7; Pit No. 3 Holding Furnaces 10&12		
Purchased Scrap	Melting Furnace No. 9	Limited to 90,000 pounds of oily purchased scrap per charge	
	Melting Furnace No. 11	Limited to 90,000 pounds of oily purchased scrap per charge	
Purchased Melting Furnace No. 9 & 11 Scrap – Automotive		Each melting furnace charge may include up to 100% purchased automotive scrap	

^{*} Note that furnace production weight range is based on the design capacity of each furnace.

Provisions for Labeling, Weight Measurement, and Flux Weight Measurement (63.1510(o)(3))

Emission Unit	Parameter	Monitoring Requirement	Frequency
Uncontrolled Group 1 Furnaces	Production Weight	Must install, calibrate, operate, and maintain a device to measure and record the aluminum production from the unit (measurement accuracy must meet +/- 1 percent). The procedure to utilize production weight for aluminum production on a unit basis is included in Appendix B.	Normal operating cycle
	Total Reactive Flux Injection Rate – Salt (Chlorine)	Record the number of pre-weighed salt flux bags added to furnace and calculate flux injection rate (lb/ton) and compare to operating range.	Normal operating cycle

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Emission Unit	Parameter	Monitoring Requirement	Frequency
	Purchased Scrap Charged	Purchased scrap is staged for each melting furnace charge. No more than 90,000 pounds of oily purchased scrap is charged if not automotive scrap.	Monthly inspection of staging area
		Each melting furnace charge may include up to 100% purchased automotive scrap.	Normal operating schedule
	Scrap Contamination Levels	Monitor purchased scrap through procurement process and scrap inspection program (Appendix A).	Each scrap shipment
Labeling		The furnaces will require visible labels that identify the applicable emission limits and means of compliance including type of unit and applicable operational controls. An example label is included in Appendix B.	Monthly inspection of label
	Emission rates for PM, HCI, HF, and dioxin/furans (melting furnaces only)	Conduct performance testing to determine emissions and establish parametric limits. A summary of the performance test results is included in Appendix D.	Once every 5 years

Scrap Inspection Program (63.1510(o)(7), (8), (p) and (q))

63.1510 requires each affected facility to implement a scrap inspection program for each Group 1 furnace without emission controls. A program can be implemented for non-uniform and uniform scrap. Arconic Tennessee LLC has implemented a program where only uniform scrap from a pre-qualified supplier is purchased. As outlined in 40 CFR 63.1510 (q), a uniform scrap inspection program should address the following elements:

- Procedures for the characterization of and documentation of the contaminant level of the scrap prior to the performance test.
- Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test.
- Operating, monitoring, record keeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.

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Procedures for the Characterization of and Documentation of Contaminant Level of Scrap Prior to the Performance Test (63. 1510(q)(1))

Utilizing extensive data compiled by Arconic Metals Procurement and Ingot metal purchasing personnel, an analysis of incoming purchased scrap aluminum was performed. A purchased scrap questionnaire was prepared and submitted to all purchased scrap vendors utilized by Arconic.

The results of the analysis indicated that a significant majority of purchased scrap contained minimal or no oil contamination. *No coated materials (e.g., painted scrap) are processed at Tennessee Operations ingot facilities.* The highest oil content of any purchased scrap processed in the uncontrolled Group 1 furnaces was determined to be "Class 1" purchased scrap. Class 1 purchased scrap is material received back from the can manufacturer in a bailed form and contains a small amount of oil. Oil sampling prior to the initial performance testing indicated that the average oil content of Class 1 purchased scrap is 1.5 % by weight. During the performance test, 90,000 pounds of purchased scrap was charged to each melting furnace.

Limitations on the Furnace Feed/Charge (63.1510(a)(2))

Given that the results of the initial performance testing indicated compliance with the secondary MACT standards, the 90,000 pounds of oily scrap per charge limitation was implemented as a furnace charge limitation for purchased scrap.

As part of the transition to automotive sheet production in recent years at Tennessee Operations, North Ingot became the primary ingot production source for automotive ingot.

Below is a simple analysis between the charges used in the initial compliance test that established the 90,000 pounds purchased scrap limit versus the expected oil content of the automotive scrap charges:

Scenario	Scrap Type	Typical Oil Content (Wt. %)	Average Charge Quantity (lb)	Average Oil Content (Ib)
Current	Class 1 (external)	1.5	90,000	1350
Automotive	Sheet	0.06	90,000	54
	Stamping Scrap	0.03	90,000	27
AT SHE SHE WAS	MARINE THE RESIDENCE OF THE PARTY OF THE PAR	Total	180,000*	81

^{*}Average total charge weight for Melters 9 & 11.

As shown above, there was approximately 1350 pounds of oil on average for external purchased scrap for the previous test charges compared to 81 pounds for the automotive scenario using an average total charge weight. This average is twice the amount of the 90,000 pounds purchased scrap charge limit for external scrap. Given the expected oil

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content of the 100% automotive scrap charges will be significantly below the "Class 1" oil quantity, Arconic believes the current test data is representative of the new scenario from an air emissions perspective. Thus, Arconic can utilize 100% external purchased automotive scrap for melting furnace charges.

Operating, Monitoring, Record Keeping, and Reporting Requirements (63.1510(q)(3)) Purchased scrap is procured by the Ingot Metal Planner to meet the monthly metal plan needed to support the established ingot casting schedule. Purchased scrap is screened against the purchased scrap standards for uniform purchased scrap and is specified to be clean and free of coatings and non-aluminum contamination. The South Ingot furnace operator inspects the load and verifies that the purchased scrap meets the specifications for uniform scrap prior to unloading. The furnace operator documents the inspection on the South Ingot scrap inspection form (example attached). Purchased scrap is stored in designated lanes. The uniform purchased scrap is blended with other clean metal units to build a furnace charge that meets the total weight and analysis restrictions of for each charge. The furnace operator transports the staged metal charge from the pad into the melting furnace building and places it intact in front of a bottom dump bucket (BDB). The BDB is filled with this charge and subsequently dumped into the furnace during charging. The staged blended charges remain intact from the storage pad to the melting furnace.

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Tennessee Operations

2016/11/14

Purchased Scrap Inspection/Unloading Procedures

- 1. Secure "Purchased Scrap Inspection/Unloading Data Sheet".
- Confirm pre-approved supplier of scrap and document on "Purchased Scrap Inspection/Unloading DATA Sheet".
- Designate purchased scrap as clean or oily scrap from pre-approved supplier designation chart and document.
- 4. Inspect scrap for inspection procedure
 - a. Look for excessive oil/grease (e.g., oil pooling on floor of delivery truck or dripping from scrap, etc.)
 - Presence of foreign materials (e.g., painted scrap, plastic, rubber, glass, etc.)
 - c. Integrity of bales
- 5. Document on data sheet if scrap load accepted or rejected.
 - a. If scrap load rejected, contact on shift Supervisor.
- Unload scrap, transport and store in appropriate designated storage area for purchased scrap and complete "Inspection/Unloading Data sheet" and return completed sheet with BOL to Metal Control.

Return completed sheet to Metal Control.

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Tennessee Operations	2016/11/14
Purchased Scrap Inspection/Unloading DATA Sho	eet
Date Received: Supplier:	2
Total Lbs.:	
Inspection Procedure: (reasons for rejecting load)	
 Look for excessive oil/grease (e.g., oil pooling on flodripping from scrap, etc.) Presence of foreign materials (e.g., painted scrap, p. 3.) Integrity of bales Inspect for presence of moisture, oxidation, ammon oxidizers, salts, bath, sulfates, rust or other corros 	olastic, rubber, glass, etc.)
Scrap accepted/rejected:	
1.) Accepted □ 2.) Rejected □	
Reason for rejection:	
Scrap Designation:(determined from pre-approved suppl	iers listing)
 Oily purchased scrap. Clean/dry purchased scrap 	
Purchased Scrap Staging Area:	
 Oily scrap storage area Clean/dry storage area 	
Received/Inspected By:	
Comments:	

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Appendix B Aluminum Production Weight Procedure

Arconic Tennessee LLC
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Secondary MACT Aluminum Production Weight Procedure for South Ingot Emission Source No. 05-0008-51; Arconic Tennessee LLC

Original Issue Date: 3/24/03

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After casting, each ingot is assigned a weight based on length cast, width, thickness, and density. The weights are assigned by Arconic's production data tracking system SAP. The ingot width is known from the size molds used to cast the ingot. The ingot length and width are then multiplied by a weight factor to produce the total weight of the ingot. The weight factor is applied within our production tracking software program and is set by Arconic quality control personnel.

The length is determined by measuring the flow of hydraulic fluid through a Micro Motion flow meter. A Programmable Logic Controller (PLC) is used to add up the length of the ingot. An ingot is measured by a tape measure every day as a check of the accuracy of the computer length. If the length is not within +/- 1", the reaction plan calls for an adjustment to be made to correct for this difference. The length process is watched as an "In Control and Capable" variable. The process manager audits the length process monthly.

It is very important to cast to the target length with minimal variation for ingot recovery. Ingot length corresponds to an amount of finished pounds. Our customer's equipment has a maximum weight they can handle. Customers prefer larger coils to minimize the number of coils feed changes per day. Arconic targets coil weight shipments as close the customer's requirements in order to minimize shipping costs and reduce costly internal scrap. Ingot length is a critical component of this process. If ingots are produced out of specification then corrective measure must be taken which include length correction via sawing and/or scrapping the material for those ingots, which are determined to be too short. In a system, where production is driven by inventory levels these are costly mistakes that directly impact inventory levels, shipping schedules and finally, costs.

For quality assurance purposes, an ingot is weighed to calibrate the PLC and manual measurement procedure using the available Secondary MACT-calibrated weigh scale.

Calculation of Furnace-Specific Weights

As stated, production weight is the basis for all input and throughput weights. The following equations are utilized to determine unit-specific weights:

Holding Furnace Input Weight (HFIW)

HFIW (lb/charge) = HFC - PW + NML

where,

HFC = Holding Furnace Capacity (lb/charge)
PW = Measured Production Weight (lb/charge)

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NML = Net Melt Loss (lb/charge)

Note: NML is obtained from monthly average net melt loss for the South Ingot

facility

Melting Furnace Input Weight (MFIW)

MFIW (lb/charge) = HFIW - MMCIW

where,

HFIW = Holding Furnace Input Weight (lb/charge)

MMCIW = Molten Metal Crucible Input Weight (lb/charge)

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Appendix C

Example Furnace Label and Monthly Inspection Form

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Melting Furnace No. 11 Emission Source No. 05-0008-51 Arconic Stack ID: TNMFRN01107

Original Issue Date: 3/24/03

Secondary Aluminum MACT Affected Facility Category: Group 1 Furnace

Maximum Allowable Emission Limits:

- Particulate Matter = 0.40 lb/ton of feed
- Hydrogen Chloride = 0.40 lb/ton of feed
- Hydrogen Fluoride = 0.40 lb/ton of feed
- D/F = 15 TEQ/Mg of feed

Input Materials:

- Scrap/Molten Aluminum Charge Rate = 280,000 lb/charge
- Purchased aluminum scrap limited to 90,000 lb per charge
- Reactive Flux (Salt Flux) = 0.9 pounds of reactive chlorine/ton of metal (1.6 lb salt per ton metal)

Control Technology to Maintain Compliance:

Pollution prevention via aluminum scrap management

Control Technology Operating Parameters:

Scrap inspection program No reactive salt flux containing fluorides are to be used Arconic Tennessee LLC Operation, Maintenance and Monitoring Plan

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Label Monthly Inspection Form [Example]

Semi-Annual Compliance Monitoring Period:

Month/ Year	#5 FCE	#6 FCE	#7 FCE	Pit #1 N Deg	Pit #1 S Deg	#9 FCE	#10 FCE	#11 FCE	#12 FCE	Pit #1 N Deg	Pit #1 S Deg	Initial

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Appendix D Performance Test Summary

Area: South Ingot

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Summary of Secondary MACT On-Going Performance Test Results Emission Source Nos. 05-0008-57 and 05-0008-21 Arconic Tennessee LLC

Table 1.1

Source	Test Date	Pollutant	Average Emission Rate	Emission Standard	Percent of Standard
		PM	0.16 lb/ton	0.40 lb/ton	40.0 %
Melting	Oct 2020 Oct 2020	HCI	0.067 lb/ton	0.40 lb/ton	16.8 %
Furnace No.		HF	0.0011 lb/ton	0.40 lb/ton	0.3 %
11		D/F	0.06 ug TEQ/Mg	15.0 ug TEQ/Mg	0.4 %
Pit No. 3 North		PM	0.0004 lb/ton	0.01 lb/ton	4.0 %
Inline Degasser		HCI	0.0000053 lb/ton	0.04 lb/ton	0.01 %

Table 1.2

			I abic 1.2		Contract to Contract to the Co	
Source	Test Date	Pollutant	Average Emission Rate	80% Capture Efficiency Emission Rate	Emission Standard	Percent of Standard
Holding	-	PM	0.068 lb/ton	0.086 lb/ton	0.40 lb/ton	21.5 %
Furnace	Oct	HCI	0.034 lb/ton	0.042 lb/ton	0.40 lb/ton	10.5 %
No. 12	2020	HF	0.00032 lb/ton	0.0004 lb/ton	0.40 lb/ton	0.1 %

Notes:

- 1) Note the "Percent of Standard" column in Table 1.2 indicates compliance of the 80% capture efficiency assumption. Emissions measured were multiplied 1.25 per 63.1512(e)(4)(iii) to account for the 80% capture efficiency assumption for the furnace exhaust.
- 2) As stated in 63.1512(e)(4)(v), round top furnaces constructed before February 14, 2012, and reconstructed round top furnaces are exempt from the requirements listed in paragraphs 63.1512(e)(4)(i),(ii), and (iii). This exemption applies to Melter Furnaces No. 9 & 11.
- Note that this is only a summary of the most recent performance tests (October 2020). The full test report for the performance test is available for review on-site.
- As allowed by the secondary MACT regulation in 63.1511(f), representative emission units may be tested to demonstrate compliance with the emission standards. As outlined in a request submitted to the Tennessee Division of Air Pollution Control (TDAPC) on April 8, 2002 and included in the Site-Specific Test Plan dated July 17, 2002, the representative emission units for South Ingot Pit No. 1 and Pit No. 3 were:

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- Melting Furnace No. 11;
- Holding Furnace No. 12; and, Pit 3 North Inline Degasser.

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Appendix E

Chlorine Mass Flow Meter Manufacturer Specification





Detecting Flow Calibration Factor Changes

Using the Micro Motion Density Measurement

Abstract: Field calibration of any flow meter is expensive and time consuming. However, it is necessary in some installations to calibrate (or "prove") meters in the field in spite of the expense and difficulty. Although Micro Motion Coriolis meters generally do not change calibration (since there are no moving parts), they are not exempt from the calibration requirements of certain applications.

The purpose of this document is to describe a methodology that provides an alternative procedure for verifying a Coriolis meter's mass flow calibration stability over time.



accuracy, confidence, and compliance through reliable flow measurement

Detecting Flow Calibration Factor Changes Using the Micro Motion Density Measurement

 Methodology for Validating the Mass Flow Measurement by Using the Density Measurement from the Coriolis Meter

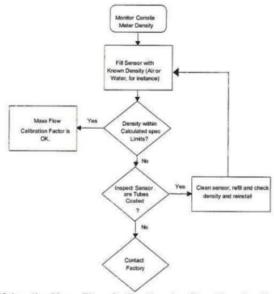
The simplest method for validating the stability of the mass flow calibration factor is to use the density measurement to confirm that the flow-tube structure has remained unchanged. By periodically filling the flow-tube structure with a fluid of known density, the variability of the measurement can be tracked over time. The variability between measured and expected values can used to determine the uncertainty confidence level of the mass flow calibration factor. It is important to note that the fluid must have known density characteristics. Any contamination of the fluid (by air, water or variable composition, for example) will skew the density measurement results. Remember that the fluid in the tube is the transfer standard so its density must be well understood.

The frequency of calibration verification is often requested in quality or regulatory procedures. Under ideal conditions, the density output would be continuously monitored and plotted against calculated control limits. A continuous verification of the maximum uncertainty of mass flow calibration factor is then easily seen. However, it is also acceptable to periodically confirm a single density value and plot that point against calculated control limits. It is recommended that this periodic confirmation occur at least once per year.



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A procedure for using the density measurement to quantify mass flow calibration stability is presented below:



Procedure for Verifying the Mass Flow Calibration by Checking the Density Measurement

The key is to trend differences between the meter's density reading and the reference fluid's expected density. Care must be taken to insure that the reference fluid density is correct. Important aspects for trending the measurements are described below:

- Fill the flow-tubes with a fluid of known density. Perform an initial density check upon installation of the meter. This can this be performed with gas flowing and the unit is in the normal operating mode.
- 2. Record the indicated meter density and fluid pressure.
- Calculate the statistical control limits based on desired confidence limits for mass-flow calibration factor.
- Control-chart the indicated fluid density with the calculated confidence limits.
- 5. Repeat steps 1 and 2 periodically according to accepted intervals.
- 6. Alarm on out-of-control density points



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2. What Impacts a Coriolis Meter's Calibration

Since a Coriolis meter has no moving parts there is nothing to wear or break. Therefore, in a clean fluid, the expectation is that the meter will never exhibit a change in calibration. However, fluids that corrode or erode the flow tube will alter the mechanical characteristics of the meter and will change the meter calibration. When corrosion or erosion occurs, the density calibration of the meter is also affected. Therefore, a shift in the density calibration of the meter can be used as an indication that the meter's mass flow calibration has changed, which is a result of flow-tube mechanical changes. This relationship is shown in Figure 1, which shows the interaction of the density and mass flow measurements in a sensor that was purposely corroded.

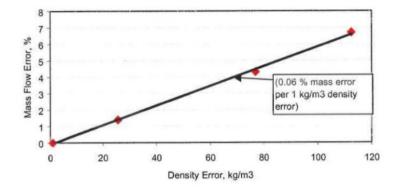


Figure 1 – Density and Mass Flow Errors with Progressive Tube Thinning on a F100. Each Point Represents Approximately 0.06% Flow Area Increase

When a meter tube corrodes the actual vibrating structure is changed because tube wall thickness decreases. Tube thinning therefore causes both the density and mass flow indications to change.

3. Detecting Mass Flow Calibration Errors Based on Density Changes

Due to the fact that tube wall thickness variations impact both the mass flow and density measurements, a diagnostic technique can be employed to assess the state of the meter's mass flow calibration, by checking the meter's density calibration. Performing a density check is easier to do than doing a mass flow verification. A density check can be done quite simply, by filling the sensor with a fluid of known density and making sure that the meter reads the correct density.



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One difficulty in applying this procedure is that fluids that coat the flow tubes can also cause a shift in the meter's density measurement. A coating on the inside diameter of sensor tubes affects the meter in the same way a changing density fluid does; the coating together with the process fluid make up a composite density. Therefore, the density indication from the meter will be skewed from the process fluid density by the amount of the coating. Since the coating is not changing the tube structure in any way, the mass flow measurement is not significantly affected. Figure 2 shows the results of a test conducted correlating changing density and mass flow with a coating applied to the flow tubes.

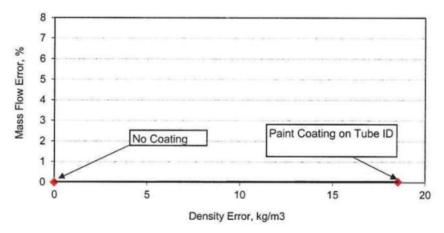


Figure 2 – Density and Mass Flow Errors with a Paint Coating on the ID of a CMF025 (6% Flow Area Decrease)

As can be seen by comparing Figures 1 and 2, coating does not impact the mass flow measurement as much as corrosion does. Therefore, an offset in the meter's density measurement accuracy may not indicate that the mass flow measurement has changed, but that coating has built up on the flow tubes. This condition can generally be verified by physically removing the sensor and inspecting it for coating buildup. If coating exists, the sensor can be cleaned, its density rechecked, and be reinstalled and put back into operation. If no coating is detected, the meter should be sent back to the manufacturer to verify its mass flow calibration. If the mass flow calibration has shifted then it is likely that a corrosion problem exists. At this point alternate flow tube materials should be considered to eliminate future corrosion problems. The methodology for checking the meter using these concepts is presented below.

Calculation of Statistical Control Limits.



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Micro Motion will experience a 0.06% change in mass flow measurement for every 0.001g/cc variation between known and expected density measurement caused by changing flow-tube structure. To establish the statistical control limits around an expected value, a user will:

- 1. Establish the worst-case limit of mass flow calibration factor uncertainty, in percent.
- 2. Divide this value by 0.06%/0.001 gm/cc. Examples for several uncertainty levels are shown below.
- 3. The resulting density value is one side of the specification limit for the control chart.

As an example, assume that an application requires that a meter be validated to better than 0.3%.

Densitylimit=
$$\frac{(0.3\%)}{(0.06\%)}(0.00 \lg/cc) = 0.005 g/cc$$

The specification limit in this example is ± 0.005 g/cc.

	Statistical Control Limits		
Mass Flow Calibration Factor Uncertainty Limits	g/cc	lb/ft ³	
0.35%	0.0058	0.3646	
0.50%	0.0083	0.5208	
0.75%	0.0125	0.7813	
1.00%	0.0167	1.0417	

Please note that the full-scale density measurement capability of a Micro Motion sensor is greater than 0 to 5 g/cc (0 to 310 lb/ft3).



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Example for Chlorine:

- Establish Uncertainty Limits for Mass Flow Calibration Factor: EPA requirements for Secondary MACT are better than ±1%. In order to allow for a safety factor of 2, the proposed control limits are ±0.5%.
- 2. Calculate control chart limits based on Uncertainty Limit above:

Densitylimit=
$$\frac{(0.5\%)}{(0.06\%)}$$
 $X0.0625b/ft3 = 0.5208b/ft3$

The specification limit in this example is ±0.5208 lb/ft3

- Determine expected value of Chlorine at operating pressures and temperatures:
 - Chlorine at 50 psig and 68F has an operating density of 0.8102 lb/ft³
 - Find the chlorine density for your operating pressure and temperature.
- 4. Monitor control chart limits around expected value. The control chart limits would be set at 1.331 lb/ft³ and 0.2894 lb/ft³. Please note that pressure changes greater than 30 psi or temperature changes greater than 120F would be needed to change the operating density outside of the control limits.
- If an excursion beyond the control limits occurs, an inspection of the meter is required. The following procedure should be followed:
 - Determine if operating pressure and/or temperature swings occurred in the process that would explain the variation.
 - Determine if the quality of the Chlorine changed. The presence of air, water, or other impurities would impact the expected density value.
 - c) If all other sources of variation have been eliminated, that the sensors Flow Calibration Factor needs to be reestablished. Please contact your Micro Motion Sales or Service representative to arrange recalibration.

ATTACHMENT 5

Title V Fee Selection Form





DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF AIR POLLUTION CONTROL

William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243 APC 36

Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

TITLE V FEE SELECTION

Type or print and submit to the email address above.						
FACILITY INFORMATION						
1. Organizati	ion's legal nar	ne and SOS co	ontrol number [as registered with the T	N Secretary of State (SOS)]	
2. Site name	(if different fi	rom legal nam	e)			
3. Site addre	ess (St./Rd./Hv	vy.)			County name	
City		Zip code				
4. Emission source reference number 5. Title V permit num					ber	
			FEE SELE	CTION		
until a new Fe	This fee selection is effective beginning January 1, When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.					
6. Payment 9	Schedule (cho	ose one):				
Calendar Ye	ear Basis (Janua	ry 1 – Decemb	er 31)	Fiscal Year Basi	is (July 1 – June 30)	
7. Payment I	Basis (choose	one):				
Actual Emissio			sions Basis		nd Allowable Emissions Basis	
8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.						
If allowable emissions: Specify condition number and limit.						
		Allowable			ulation method and provide	
or Actual example. Provide condition number that specifies m					•	
Source ID	Pollutant	Emissions		applicab	le.	

€ (Continue	d)				
				 	
Source ID	Pollutant	Allowable or Actual Emissions	If actual embed	ons: Describe calcu	endition number and limit. eletion method and provide ear that specifies method, if ie.
		α	INTACT INFORMATION		
9. Billing cor	tied:			Phone number w	th area code
Mailing ac	idress (St./Rd.	/Hwy.}		Fex number with	area code
City		State	Zip code	Email address	
			VATURE BY RESPONS		
mentioned fa	acility, certify	that the Info	mation contained in	the submittel is a	esponsible person of the above courate and true to the best of
10. Signatur		in in 14.4 3960	ын ээ-хо-/и х (в <u>д4), (</u>	ne oversion & n	sade under penalty of perjury. Date
Signer's i	name (type or	print)	Title		Phone number with area code

TITLE V PERMIT STATEMENT

Renewal 3

Facility Name: Arconic Inc. – Tennessee Operations South Ingot and Remediation
City: Alcoa
County: Blount

Date South Ingot Renewal	November 25, 2020
Application Received:	
Date South Ingot Application	November 25, 2020
Deemed Complete:	

Emission Source Reference	05-0008 South Ingot South Remediation
Number:	
Permit Number:	578688

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to Arconic Inc. – Tennessee Operations and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD - Prevention of Significant Deterioration

NESHAP - National Emission Standards for Hazardous Air Pollutants

NSPS - New Source Performance Standards

MACT - Maximum Achievable Control Technology

NSR - New Source Review

I. Identification Information

A. Source Description: Arconic Inc. – Tennessee Operations is located in Alcoa, Tennessee. The facility is a primary and secondary aluminum manufacturer. South Ingot and Remediation includes the following emission units or activities.

List and describe emission source(s):

05-0008-21, South Ingot Casting Pit No. 1

05-0008-57, South Ingot Casting Pit No. 3

05-0008-72, Skin Cooling and Storage

Insignificant Activities

Various insignificant activities are listed in the permit applications.

South Remediation only has insignificant activities.

B. FACILITY CLASSIFICATION

1. Attainment or Non-Attainment Area Location

Area is designated as an attainment area for all pollutants.

2. Company is located in a Class II area.

C. Regulatory Status

1. PSD/NSR

This facility is a major source under PSD.

2. Title V Major Source Status by Pollutant

		If emitted, what is the facility's status?
Pollutant	Is the pollutant emitted?	Major or Non-Major Source Status
PM	Yes	Major
PM ₁₀	Yes	Major
SO_2	Yes	Major
VOC	Yes	Major
NO _X	Yes	Major
СО	Yes	Major
GHG (CO2e)	Yes	Major
Individual HAP	yes	Major
Total HAPs	yes	Major

3. MACT Standards

This facility is a major source for HAPs.

This facility is subject to:

40 CFR part 63 subpart LL, National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants

40 CFR part 63 subpart RRR, National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

This portion of the facility may be subject to 40 CFR part 63 subpart GGGGG, National Emission Standards for Hazardous Air Pollutants: Site Remediation, if an action project triggers applicability.

4. Program Applicability

Are the following programs applicable to the facility?

PSD yes NESHAP yes NSPS yes

II. Compliance Information

A. Compliance Status

Is the facility currently in compliance with all applicable requirements?

Yes

No

Are there any applicable requirements that will become effective during the permit term?

III. Other Requirements

A. Emissions Trading

The facility is not involved in an emission trading program.

B. Acid Rain Requirements

This facility is not subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

Not Applicable

IV. Public Participation Procedures

Notification of this draft permit was mailed to the following environmental agencies:

- 1. EPA Region 4 Air Planning Branch
- 2. North Carolina
- 3. Cherokee Nation
- 4. Knox County

Public Notice Date:

April 6, 2016

Public Comments Received:

Arconic's comments dated May 9, 2016 see attachment A.

The changes were made based on Arconic's comments. In addition, the following changes were made base on the Minor Modification application to Title V permit 562362, which this permit replaces, dated May 13, 2016. The minor modification application requested that the requirements of 40 CFR part 63 subpart RRR revisions be incorporated into the Title V permit,

Old condition E4-10 new E4-11: changed "through 8" to "through 9" in the last sentence.

Old condition E4-12 new E4-13: Added, "As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the permitting authority for major sources, or the Administrator for area sources to determine the total weight of feed/charge or aluminum production to the affected source or emission unit."

Old condition E4-13 new E4-14: Added, "For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the performance test using the procedures in 40 CFR §631512(o).

Public Hearing Date:

None

Permitting Activities Since Original Permit Issuance (Previous Permit 548327)

Administrative Amendment #1: Arconic submitted a notification of change in responsible official dated July 11, 2005. Minor Modification #1: Arconic changed the emission factors for particulate matter (PM), hydrogen chloride (HCl), and dioxins/furans (D/F) for melting furnace #9 and #11 in casting pit #3 based on a MACT compliance test conducted in May 2006. The emission factors changed from 0.05 lbs. of PM emitted per ton of aluminum processed to 0.108 lbs. of PM emitted per ton of aluminum processed, 0.04 lbs. of HCl emitted per ton of aluminum processed to 0.018 lbs. of HCL emitted per ton of aluminum processed, and 0.15 micrograms (µg) TEQ (toxicity equivalent) per megagram (Mg) of aluminum processed to 0.445 µg TEQ per Mg of aluminum processed. The changes are in the fee table of condition E1-1, and the compliance method of condition E6-1.

The facility changed the opacity requirement for conditions E5-6 and E6-2. The change to the opacity requirement would allow one six-minute period in any one hour period were the opacity exceeded 20%, and four six-minute periods in any 24-hour period were the opacity exceeded 20%.

Permit Renewal Changes

Change in Responsible Official

Changes Made Due to Comments During Public Notice Period

Company comments:

Page 19 - Condition E2

The annual compliance certification should be for the period of July 1 through June 30 rather than January 1 to December 31 as we discussed.

Page 27 - Condition E5-1

The hydrogen chloride emission factors for North and South Inline degassers should be 0.00005 lb/ton rather than 0.0005 lb/ton.

Permit Changes Since Issuance of permit 562362

Minor Modification #1:

Arconic changed the emission factors for particulate matter (PM), hydrogen chloride (HCl), and dioxins/furans (D/F) for melting furnaces #9 and #11 in casting pit #3 based on a MACT compliance test conducted in 2011. The changes were made in conditions MM1E4-1, MM1E4-2, MM1E4-3, MM1E4-4, and MM1E6-1. The particulate matter (PM) and hydrogen chloride (HCl) emissions for casting pit #3 degassers were also changed.

Arconic changed the emission factors for particulate matter (PM) and hydrogen chloride (HCl) for holding furnaces #5, #6, #7, #10 and #12 in casting pit #3 based on a MACT compliance test conducted in 2011. The changes were made in conditions MM1E4-1, MM1E4-3, and MM1E5-1.

A new responsible official was identified.

Administrative Amendment Request:

Language was removed from condition E4-10 that was not required by 40 CFR §63.1510.

Minor Modification #2:

Arconic modified their OM&M plan.

Significant Modification #1

The entire permit is included with this significant modification.

The new reporting addresses were included along with the address to report electronically.

The volatile organic compound emission limitations in conditions E5-1(SM1) and E6-2(SM1) were removed due to the issuance of PAL (plant wide applicability limitation) permit for VOCs, permit 967460, which was effective December 1, 2013.

Public Notice Date: August 12, 2014

No comments

Public Hearing Date: NA

Minor Modification #3:

The facility is updating emission factors based on the performance tests conducted in October 2015. This minor modification updates the emission factors in conditions E4-1, E4-2, E4-3, E4-4, E4-5, E5-1, and E6-1. The OM&M plan was also updated.

Conditions A12, B5, E2(b), and E3-8 were amended.

Permit Changes Since Issuance of permit 570521 previous permit number 562362 Minor Modification #1

The facility is adding an NSPS temporary rock crusher with conveyor and screen.

EPA comments: No comments, email dated August 11, 2016

Minor Modification #2

The facility is replacing an NSPS temporary rock crusher with two (2) NSPS temporary rock crushers.

Alcoa changed their name to Arconic on November 1, 2016.

EPA comments: None

Minor Modification #3

The facility removed the two (2) NSPS temporary rock crushers.

Arconic updated their OM&M plan dated November 16, 2016, with their new name and revised the "Aluminum Production Weigh Procedure" in Appendix B.

Minor Modification #4

THE FACILITY REVISED ITS OM&M (OPERATION, MAINTENANCE, AND MONITORING) PLAN (ATTACHMENT 4) TO SATISFY THE ADDITIONAL REQUIREMENTS OUTLINED IN 40 CFR §63.1501, SUBPART RRR; COMPLIANCE DATE SEPTEMBER 18, 2017. THE ADDITIONAL REQUIREMENTS INCORPORATE EMISSION STANDARDS FOR HF AS WELL AS TESTING OF EXISTING UNCONTROLLED GROUP 1 FURNACES.

CONDITION A8: REVISED CONDITION TO INCLUDE UPDATED LANGUAGE.

CONDITION E1: REVISED CONDITION TO INCLUDE UPDATED LANGUAGE.

CONDITION E6-1: REVISED EMISSION UNIT ON 'TOTAL FLUORIDES' FROM LB/HR TO LB/TON PER 40 CFR §63.1505(I)(4).

Emission factors were updated in the following conditions to reflect results of the most recent performance test: E4-1, E4-2, E4-3, E4-4, E4-5, E4-6, E5-1, and E6-1.

Minor Modification #5

Condition B5: Revised condition to include updated language.

Condition B6: Revised condition to include updated language.

Condition D9: Revised to include accurate regulatory citation.

<u>Condition E1</u>: Revised condition to remove 'actual emission basis', included allowable emissions in fee table; both per Department guidance; changed AAP (Annual Accounting Period) from fiscal year to calendar year; per the facility's request.

Condition E2: Revised condition to include updated language.

Conditions E4-1 – E4-6: Revised emission factors based on the 80% capture efficiency in 40 CFR 63: Subpart RRR.

Condition E5-1: Revised emission factors based on the 80% capture efficiency in 40 CFR 63: Subpart RRR.

Condition E6-1: Revised emission factors based on the 80% capture efficiency in 40 CFR 63: Subpart RRR.

-Revised OM&M (Operation, Maintenance, and Monitoring) Plan (Attachment 4) to include automotive scrap processing to Melting Furnaces 9 and 11.

Administrative Amendment #1

In a letter dated March 2, 2020 the facility ownership was updated from Arconic Inc. to Arconic Tennessee LLC. AA #1 Issued March 24, 2020

EPA comments:

Minor Modification #6

The facility revised its OM&M (Operation, Maintenance, and Monitoring)Plan (Attachment 4). Conditions E4-1 – E4-6: Revised emission factors based on application dated December 14, 2020. Corrected the date in the OM&M plan to state 2020 rather than 2015. Updated fee emissions summary table in condition E1. EPA comments: Aside from noting that Note 3 in Appendix D of the OM&M plan lists the test date as 2015 rather than 2020 as the tables state, we have no comments at this time.

Permit Renewal Changes permit #578688

Notification of this draft permit was mailed to the following environmental agencies:

- 1. EPA Region 4 Air Planning Branch
- 2. North Carolina
- 3. Cherokee Nation
- 4. Knox County

Public Notice Date: TBD

Public Hearing Date: TBD or None



Alcoa Tennessee Operations 2300 North Wright Road Alcoa, TN 37701-3141 USA

SUBMITTED VIA ELECTRONIC MAIL

May 9, 2016

Ms. Michelle Walker Owenby, Director Tennessee Dept. of Environment & Conservation Division of Air Pollution Control William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15th Floor Nashville, TN 37243

RE: Draft Title V Permit Comments
05-0008 Major Source (Title V) Operating Permit
South Plant Ingot and Remediation
Alcoa Inc. – Tennessee Operations
Blount County

Dear Ms. Owenby:

Attached, please find Alcoa's comments for the above referenced draft permit. If you have any questions concerning this correspondence, please contact me at (865) 977- 2848.

Sincerely,

Alisa Hatmaker

Environmental Engineer Tennessee Operations

alisa Hatmaker

Enclosures

Alcoa Inc. - Tennessee Operations Comments to Draft Title V Permit 570521

Section E4 - Emission Standards for Group I Furnaces

As required by the revised National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production (40 CFR Part 63) promulgated on September 18, 2015, operators of a source constructed after February 14, 2012, must comply with the following requirements of the subpart by September 18, 2017: 40 CFR 63.1505(i)(4) and (k)(2) emission standards for hydrogen fluoride (HF).

Molten metal from the adjacent secondary aluminum can reclamation production operation is input into the melting and holding furnaces where alloying and salt fluxing occurs. The operation does not receive molten metal from any primary aluminum production facilities. Also, the salt flux material that is utilized in these furnaces does not contain fluoride. The performance stack test completed in October 2015 included HF analysis. The results of this test indicated very trace amounts of HF emissions. The level of HF emissions from this test where significantly lower than HF emissions from a 2000 performance stack test when the facility received molten metal from the adjacent primary aluminum production facility.

As such, Alcoa is requesting that the Division include the following language into this section regarding this requirement.

Hydrogen fluoride (HF) emissions from group 1 furnaces shall not exceed 0.40 pounds of HF per ton of aluminum produced. Alcoa is using production rate rather than feed/charge rate pursuant to 40 CFR §63.1506(d)(3).

40 CFR §63.1505(i)(4)

Compliance Method: Compliance with this emission limit shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test assure continuous compliance.

The operating parameters are included in the current OM&M Plan (Attachment 4). Records of the operating parameters must be maintained as described in the OM&M plan. The results and dates of the performance tests are noted below:

Test Date	HF Results (lb/hr)	HF Emission Factor (lb/ton)
October 2015	NA	0.002
October 2015	NA	0.000059
	October 2015	October 2015 NA

Page 1

Section E5-1 & E6-1 - Total and Gaseous Fluoride Limits for Casting Pit #1 and Casting Pit #3

Alcoa is requesting the Division remove the daily emission limit for Total Fluorides (Casting Pit #1) and Gaseous Fluorides (Casting Pit #3) due the process description as described above. Alcoa requests that daily compliance for HF be based on the recent stack test similar to the compliance method requested for Section E-4. The following language is requested.

E5-1 Emissions from this source shall not exceed the rates in the following table:

Pollutant	Emission Rate	Regulatory Basis
Total Fluorides	0.40 tons/ton	40 CFR 63.1505(i)(4)

Compliance Method: Compliance with the emission rate of total fluorides shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test assure continuous compliance.

E6-1 Emissions from this source shall not exceed the rates in the following table:

Pollutant	Emission Rate	Regulatory Basis
Total Fluorides	0.40 tons/ton	40 CFR 63.1505(i)(4)

Compliance Method: Compliance with the emission rate of total fluorides shall be demonstrated by a performance test. The results from the performance tests and operation of the units within the operating parameters established during the performance test assure continuous compliance.